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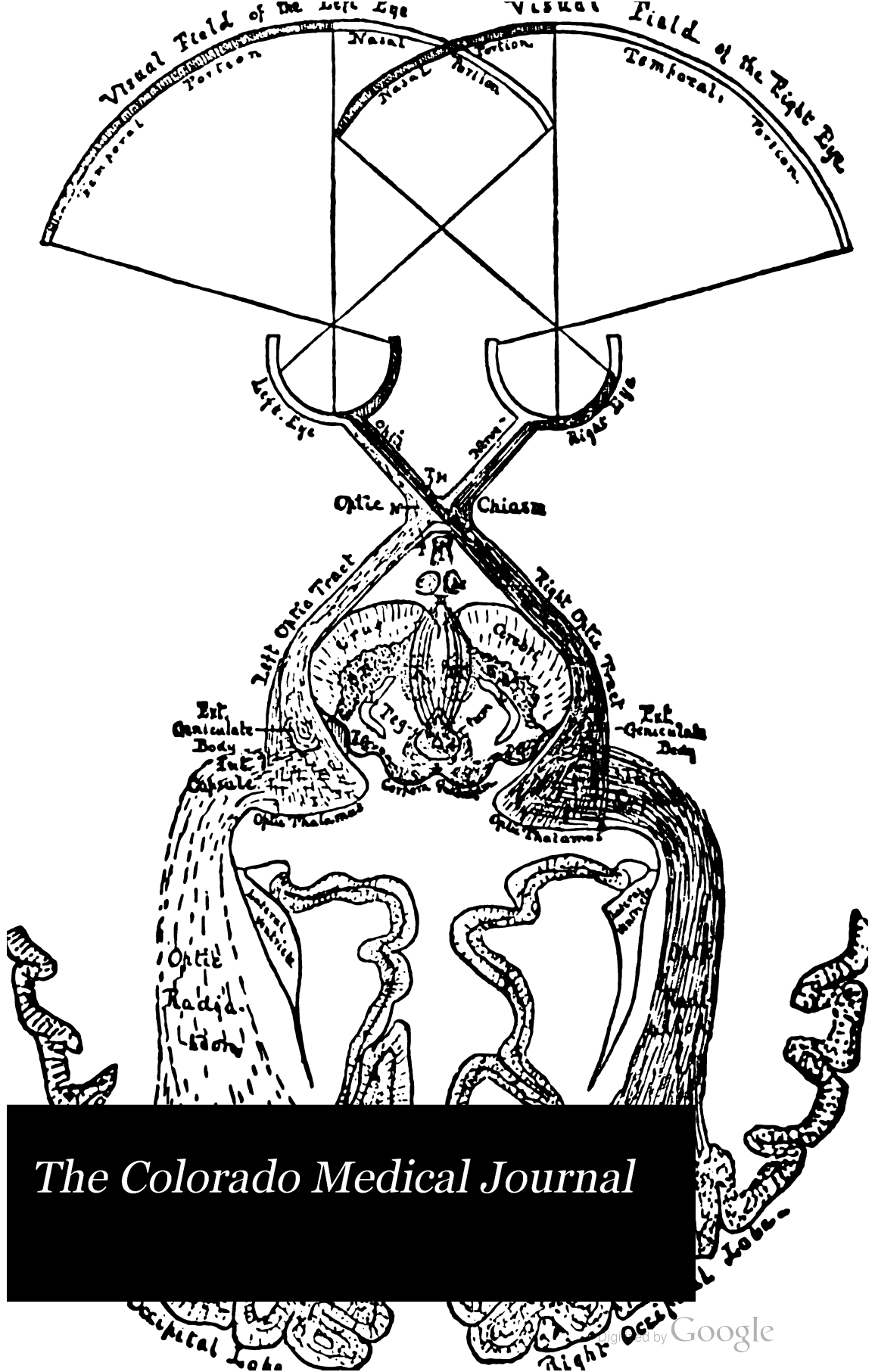
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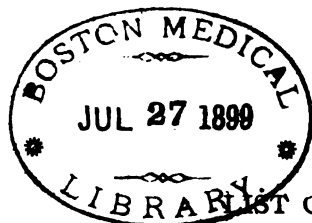
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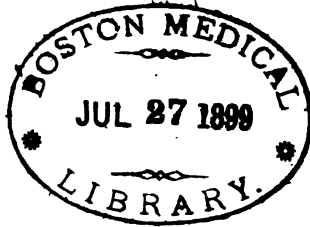
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LIST OF CONTRIBUTORS TO VOLUME III.

AXTELL, MRS. E. R., 314.....	Denver, Colo.
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BLAINE, J. M., 244.....	" "
BLOW, R. G., 25.....	New Grenna, N. J.
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CAMPBELL, W. A., 338.....	Colorado Springs, Colo.
DENISON, CHARLES, 318.....	Denver, Colo.
ELDER, CHARLES S., 353.....	" "
ESKRIDGE, J. T., 96, 249.....	" "
FINNEY, FRANK, 373.....	La Junta, Colo.
FISK, S. A., 13, 205, 389.....	Denver, Colo.
FREEMAN, LEONARD, 327.....	" "
GALT, M. JEAN, 24, 67, 119, 157.....	" "
GODFREY, A. C., 208, 301, 478.....	" "
GROSSWELL, CHARLES, M. R. C. V. S., 443.....	" "
HALL, J. N., 35, 74, 195, 386.....	" "
HAWES, JESSE, 457.....	Greeley, Colo.
HERSHEY, E. P., 295, 474.....	Denver, Colo.
HOLMES, A. M., 48.....	" "
HOPKINS, S. D., 5, 288, 334.....	" "
HYRUP-PEDERSEN, P., 8, 345.....	" "
JOHNSON, CARL, 322.....	" "
LAWNEY, ELKANOR, 236.....	" "
LEVY, ROBERT, Insert No. 5.....	" "
LOBINGIER, A. S., 41, 474.....	" "
LOBINGIER, KATH R. 368.....	" "
MACOMBER, G. N., 463.....	" "
MCCREERY, R. L., 275.....	Colorado Springs, Colo.
MCLAUTHLIN, H. W., 247, 407.....	Denver, Colo.
MELVIN, J. T., 212.....	Saguache, Colo.
MITCHELL, W. C., 125, 414.....	Denver, Colo.
MUNN, W. P., 10, 32, 115, 242, 354, 434.....	" "
NELSON, C. D., 303.....	Greeley, Colo.
OAKES, F. W., 399.....	Denver, Colo.
PACKARD, G. B., 365.....	" "
PARKHILL, CLAYTON, I, 79.....	" "
PEAVEY, JOSEPHINE, 195.....	" "
PEDEN, B. A., 381.....	Manzanola, Colo.
PERKINS, I. B., 289.....	Denver, Colo.
POWERS, C. A., 360.....	" "
REED, W. W., 136.....	Fowler, Colo.
RIVERS, E. C., 387.....	Denver, Colo.
ROGERS, E. J. A., 403.....	" "
ROVER, H. W., 39.....	" "
SEARS, MARK H., 453.....	" "
SEEBASS, A. R., 45, 67, 308.....	" "
SEWALL, HENRY, 24.....	" "
SMITH, ROBERT MEADE, 84, 142, 175.....	Colorado Springs, Colo.
SPIVAK, C. D., 77, 203, 214, 361, 393, 438, 441, 466.....	Denver, Colo.
SPIVAK, MRS. C. D., 437.....	" "
STOVER, G. H., 110, 148, 217, 305, 385.....	" "
TANDY, MR. F. R., 377.....	" "
TENNANT, C. E., JR., 33.....	" "
THOMAS, J. N., 236.....	" "
VAN ZANT, C. B., 23, 65, 119.....	" "
WALKER, L. M., 22, 64, 117, 156, 194, 234, 428.....	" "
WETHERILL, H. G., 35, 51, 245, 433, 442.....	" "
WHITNEY, MABEL, 470.....	" "
WOODWARD, IRA, 377.....	Mercur, Utah.
WORK, HUBERT, 422.....	Pueblo, Colo.

5051



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DENVER, COLO., JANUARY, 1897.

NO. I

Original Communications.

TWO CASES OF FRACTURE OF THE SKULL.*

By CLAYTON PARKHILL, M. D.,
Denver, Colo.

*Professor of the Principles and Practice of Surgery and Clinical Surgery, and
Dean of the Medical Department of the University of Colorado; Visiting
Surgeon to the Arapahoe County and St. Luke's Hospitals; Sur-
geon General, Colorado National Guard, Etc.*

We have two cases of unusual interest to show you to-day. Both were admitted yesterday, and I will ask you to examine them with me. Both give a history of head injury.

The first you see before you. He is perfectly conscious and tells me that two days ago, on alighting from a street car, he was struck from behind by a bicycle and thrown forward, striking his head against the side of the car. Yesterday he presented himself as a patient at the University of Colorado Dispensary, and walked from there to this Hospital, a distance of about a mile.

On examination several significant facts are apparent. First, the blow was received on the right side of the head, in the temporal region. You will recall that this is one of the weakest and thinnest portions of the skull. You will observe that he has on the corresponding side a "black eye," with no evidence of injury in that immediate region. In head injuries this may be a symptom of the greatest importance. In this case it probably indicates a fracture of the orbital roof, permitting an outflow of blood into the loose orbital tissues. On separating the lids we have another indication of fracture at the base of the skull in a sub-conjunctival ecchymosis. This is indicative of hæmorrhage into the sheath of the optic nerve. It is one of the most reli-

* A Clinical Lecture Delivered at the Arapahoe County Hospital, November 24, 1896.

able indications of fracture at the base of the skull involving the anterior fossa. On inquiry I find that he suffered a severe hæmorrhage from the nose and from the mouth immediately following the injury. This is significant, in as much as he says he never had nose-bleed before in his life.

The hæmorrhage from the nose might come from two sources. It might either be poured out from one or both of the Eustachian tubes, indicating involvement of the petrous portion of the temporal bone, or it might come from a fracture of the cribriform plate of the ethmoid, extending into the foramen cæcum and opening the superior longitudinal sinus. In that event the hæmorrhage would probably be of dark blood, and difficult to control. This, the man says, was the case. The hæmorrhage into the mouth might either have been due to the trickling of the blood from the posterior nares or it might indicate a fracture through the basilar process of the occipital bone with rupture of the pharyngeal vault. An examination of the throat shows no ecchymosis behind the posterior pharyngeal wall, which probably eliminates basilar fracture, but it shows the pharynx smeared with blood.

He further gives a history of bleeding from the left ear. An examination shows no injury of the external ear. Some dried blood is found in the meatus. This bleeding may either be due to injury of the tympanum alone, or to a fracture through the petrous portion of the temporal bone. In as much as you will observe that he cannot hear my watch held close to the ear, it is probable that the latter condition obtains and that the auditory nerve has been destroyed. I find also that he complains of a loss of sensation in the region supplied by the first and second divisions of the right fifth nerve. The first is significant of a fracture involving the foramen lacerum anterius, and the second of a fracture involving the foramen rotundum, those being the bony openings which give exit to those divisions. He finds it impossible to protrude his tongue. This is probably not indicative of paralysis of the muscles as he complains of inability to separate the jaws to the full extent, owing, no doubt, to a contusion of the right masseter muscle, evidence of which you see in an abrasion over that region. An examination of the reflexes show them to be somewhat exaggerated on the left side. This is probably indicative of pressure from the hæmorrhage at the base of the brain. That it is not great in amount is shown by the fact that he is perfectly conscious and has a practically normal pulse and temperature. From this examination I think you will agree with me in a diagnosis of extensive fracture at the base of the skull, involving the anterior and middle fossæ.

You might now ask me what treatment should be instituted for

this man. Very little. The most important will be absolute rest in bed. We will keep the excretory organs active, because that will assist in nature's effort to absorb the effused blood at the base of the brain. We will give him light, easily digested food. Most surgeons recommend an ice bag to the head in these cases, but I have always been very skeptical as to the good resulting from such treatment. In case he should become delirious and show excessive irritability of the nervous system, we will give him some of the sedatives, preferably bromides. The nasal cavities and external ear should be cleansed with some antiseptic solution several times a day, in order to prevent infection of the wounds in this region. Such an infection may be very disastrous, and would probably result in septic basilar meningitis.

CASE 2.—This patient gives a history of having been struck on the head with an ax about twenty-four hours ago. After the injury he was able to walk from Globeville to the city hall, a distance of about four or five miles. Since his entrance into this hospital he has been dressed, and has been anaesthetized, preparatory to our examination and operation, if necessary. On the dressings being removed you will observe that the entire scalp has been shaved. This is a point in the treatment of scalp wounds, whether associated with fractures of the skull or not, which is of great importance. It is impossible to thoroughly cleanse a wound of the scalp unless the entire head has been shaved. You will observe an irregular lacerated wound directly on top of the head, or at the point described by anatomists as the obelion. On examining this wound I find at its bottom a well marked depressed fracture of the skull. The depression is not great, but evidently corresponds to the size and shape of the pole of the ax. Before anaesthetization he did not present a single symptom referable to brain injury either in the way of mental derangement, compression or concussion.

In the absence of symptoms you might ask me what is the proper treatment for this fracture. Should we simply stitch up this scalp wound and wait for symptoms and treat him on the "expectant plan" or should we trephine the skull and elevate the depressed bone? If you will read the books of most of the older surgeons you will find that they will advise you to pursue the former method. In the light of modern surgery I insist that such is absolutely bad practice, and that every case of depressed fracture of the skull, simple or compound, with or without symptoms, should be operated upon. This depressed bone, whether giving rise to immediate symptoms or not, cannot fail to act as an irritant to the membranes of the brain or to the brain itself. This irritation is likely sooner or later to result in a pachymeningitis or cerebritis, as a consequence of which the patient may

suffer from epilepsy, from cyst of the membranes or the brain structure itself, and possible insanity.

Before proceeding to operate on this case, however, it is necessary to remember an important anatomical fact, which is that the superior longitudinal sinus lies directly under this depressed bone. In applying the trephine we will not place it over the line of the sinus, but to one side of it. It is possible that the bone itself may have wounded the sinus as its superior wall is extremely thin, but we will take no chances in using this instrument. I find it is necessary to enlarge the wound in the soft parts very considerably in order to give room for our operation upon the bone. This does not increase the risk to the patient, but no operation should be undertaken until a clear view is had of the field of injury. Permit me to call your attention to a fact which a close inspection of the line of fracture reveals. I find hair caught and retained in the fissure, around almost the entire circumference of the fracture. This may seem a trifling matter, but it still further emphasizes what I said before regarding the necessity for operation in all of these cases. The hair of the scalp is always loaded with micro-organisms and its retention here would certainly lead to infection of the wound with the probability of the dangers of septic meningitis. I will now apply the trephine as far away from the longitudinal sinus as possible. You will observe that the stylet is placed on the sound bone with only about one-third of the circumference of the instrument extending over the line of fracture. It is necessary to cut a button out of the sound bone in order to secure a solid fulcrum on which to rest the elevator with which to bring into place the depressed portion. There is one rule for the use of this instrument which should never be forgotten, and that is to proceed as though this were the thinnest skull ever seen. I have trephined skulls as thin as an egg-shell. I have removed the button without wounding the dura. On using the elevator you will observe that it is impossible to bring the depressed portion of bone into its normal relationship. In this case I cut it away with forceps, using the Keen rongeur for that purpose. I am careful to remove all the hair entangled in the fissure together with the irregular projecting margins. The removal of the bone has resulted in a considerable hæmorrhage. It is dark and comes from two or three points in the longitudinal sinus. This probably marks the location of the entrance of the parietal veins into the sinus.

I will now cleanse the wound with an antiseptic solution. The dura has not been opened, so we will be perfectly safe in using it. Had there been an opening in the dura we would have used simply the normal salt solution. We must now decide how to check this hæmorrhage. It may be done in two ways, either by packing gauze

over the sinus when we close the wound, or by enlarging the opening into the sinus and packing that great vessel with gauze. We will employ the former method in this case.

You might ask me if I will take any precautions to prevent adhesions between the tissues of the scalp and the membrane of the brain, because it is a well known fact that such conditions frequently give rise at subsequent periods to unpleasant nervous manifestations. A heavy gold foil is the material most frequently used. It would be inadmissible in this case, however, on account of the necessity for packing over the sinus to check the hæmorrhage, but if there was no bleeding and no probability of infection I would use it. This should be done at a subsequent operation. We will now suture the wound, pack a strip of iodoform gauze over the sinus, apply a dressing and return the patient to bed.

RESPIRATORY PARALYSIS FROM HÆMORRHAGE AROUND THE MEDULLA.

By S. D. HOPKINS, M. D.,
Denver, Colo.

*Lecturer and Clinical Lecturer on Nervous and Mental Diseases, Medical
Department University of Denver.*

Through the kindness of my friend, Dr. J. N. Hall, I am able to report this most interesting case, and have added other cases of the same character, but brought about by different causes.

Mrs. X., aged 27, well developed and rather fat, was pregnant, and exactly ten calendar months after her last menstruation and five months and twelve days after feeling motion, began to be in labor. At the end of twenty-four hours, moderate dilatation of the os had occurred. Position of head, O. D. P. After repeated 15-grain doses of chloral were administered, the last dose accompanied with one-eighth grain of morphine sulphate, dilatation of the os to the extent of three inches occurred. This amount of dilatation was reached after the patient had been in labor for thirty-two hours. At this time, in consultation with Dr. T. E. Taylor, it was determined by measurement that the pelvis was of natural size and, under chloroform, forceps were applied (high operation) and extraction made. Child, female, about seven and one-half pounds in weight, and well developed. Heart beat vigorously, but there was no sign of a respiratory movement. All artificial means known to stimulate respiratory action were employed without success; nevertheless the heart continued to beat for fifty minutes, when we made traction on the tongue, and the child breathed for twenty minutes, after which this method lost its effect and the mouth

to mouth method was used, but the heart gradually failed, and the child died two and a half hours after birth.

An autopsy was held twenty-four hours after death. The external surface was normal, excepting a few bruises upon the head, superficial, and caused by the forceps. Examination of the brain showed that a hæmorrhage had occurred around the medulla, due to rupture of the anterior spinal artery, a branch of the vertebral. Nothing abnormal could be found in any other portion of the brain.

Dr. J. T. Eskridge¹ reports a case of tumor and large cyst of the cerebellum, with symptoms extending over several years.

The patient was eleven years old, and suffered from spastic seizures, with all the classical symptoms of tumor of the brain. The day that she died the patient developed Cheyne Stokes respiration, and at two p. m. respiratory action ceased, but the heart continued for several minutes while artificial respiration was employed.

Hughlings Jackson² reports a case of cyst of the cerebellum; weakness of spinal muscles; death from failure of respiration. The patient was a male, thirty years old, who suffered from symptoms of an intracranial lesion, from 1889 to February 13, 1890. The day previous to his death he suffered from a severe headache, with occasional vomiting, and at six p. m. he suddenly became unconscious and his breathing ceased, though his pulse continued fairly good. Artificial respiration was commenced at once and continued until 2:30 next morning, when the heart stopped beating. During the eight hours and a half that artificial respiration was continued, there was no sign of natural breathing.

J. F. Atkins³ reports the following interesting case of tumor of the cerebellum: "J. B., aged 42. One evening I was called to see him in the ward, and found him in a state of coma. A few minutes later he stopped breathing, but his heart was still beating (140 per minute). Artificial respiration was at once commenced and continued for three hours and a quarter. At the expiration of this time he commenced breathing naturally, and it was no longer necessary to perform artificial respiration. A few days later he was as well as before the onset of the coma, and was able to walk with assistance. He died eight weeks afterward from asthenia, and the cerebellar tumor was verified at the post mortem.

We not only find these phenomena present in the above class of cases, but they are observed in shock, this fact having been pointed out by J. F. Kramer⁴. He says that death due to syncope is produced

1. *Medical News*, August 17, 1885.

2. *British Med. Journal*, Feb. 24, 1894.

3. *British Med. Journal*, Mar. 31, 1894.

4. *Boston Med. and Surg. Journal*, Dec. 3, 1896.

by paralysis of the respiratory centers, the cardiac centers remaining intact.

This strange condition can be explained by a study of the anatomy and physiology of the nervous mechanism of respiration, and of the cardiac action. In the first place, we know that the respiratory centers are situated in the floor of the fourth ventricle, at the upper and back part of the medulla. As to the cardio-inhibitory centers, we do not know the exact position of them, but they are in close proximity to the former. The pneumogastric nuclei are situated in the medulla, and from them fibres run to the respiratory and cardio-inhibitory centers; therefore the function of the vagi is two-fold; first, to regulate the respiratory action, and, secondly, to inhibit the heart's action. Experimental physiology has proven this fact, that if we make a section of the pneumogastric nerves, we will not have complete failure of respiration, but it produces a marked change in respiratory movement, in that each breath becomes deeper and more prolonged than normal, while the rate of respiration is reduced about one-half. This can be explained by the fact that the respiratory centers are both reflex and automatic.

The pneumogastric nerves form a large portion of the supply of nerves to the heart and, as stated, the function is to regulate the heart's action by communicating with the cardio-inhibitory center in the medulla. The heart not only receives its nerve supply from the pneumogastric nerve, for it has been proven by the experiments of Gaskell⁵ and others, that the fifth, the sixth, the seventh and the eighth cervical, and the first, but principally the second, dorsal nerves pass to the cervical sympathetic ganglia, and hence, by the cardiac splanchnic, to the heart. When these nerves are affected by inflammation, as they are in some cases of ascending neuritis, we will have sudden death due to failure of the heart's action. On the other hand, if we stimulate the pneumogastric nerves with an electrical current we at once cause a stoppage of the heart's action for a short time, whereas, if we make complete section of these nerves it will cause an increase in the rapidity of the heart's action. The most interesting physiological experiment known of in this connection is the following: "If we injure or destroy the medulla, we cause instant death; but if the portion of the medulla between the calamus scriptorius and the vasomotor center be destroyed, respiration ceases, although the heart's action is undisturbed. We cannot positively prove why this takes place, but we surmise that in this space the fibres which run from the pneumogastric nuclei to the respiratory center have their course.

In studying these cases it is a difficult task to come to a definite

5. *Medical News*, Jan. 6, 1896, page 1.
6. *Foster's Physiology*, page 250.

conclusion as to the exact causes and structures involved, producing this strange condition. I am of the opinion that, in the first case, the disturbance of respiration was caused by direct pressure upon the respiratory center, over the portion of the medulla between the calamus scriptorius and the vaso-motor centers, for if the pneumogastric nuclei were infringed upon we would have the cardiac action involved, in conjunction with respiration. This naturally leads up to another question: Why is it that respiration is affected and the hearts action unimpaired when the centers are situated so close together?

In the first place, the fibres which run to the respiratory center occupy this space, and, secondly, the cardio-inhibitory centers must be much more resistant than the former. This view would not only hold good in the case of hæmorrhage, but also in tumors of the cerebellum, where they produce pressure on the medulla.

Buzzard has suggested that in tumors of the cerebellum which have caused failure of respiration, where the heart continued to beat, that it is due to the fact that the same changes take place in the respiratory centers that are found in the optic nerves in this class of cases. But if this be true we would have respiration gradually failing, and not suddenly, as in the above cases. The only explanation one can give for these phenomena occurring in shock is that the respiratory apparatus is less resistant than other portions of the nervous system, especially the cardio-inhibitory apparatus.

REPORT OF A CASE OF ATRESIA OF THE VAGINA, CAUSED BY DIPHTHERIA DURING CHILDHOOD, HÆMATO- COLPOS, OPERATION, RECOVERY.

**By P. HYRUP-PEDERSEN, M. D.,
Denver, Colo.**

On September 12th of last year I was called by Dr. R. L. Thorp to see Miss M., who gave the following history: She was 16 years old, and suffered three years previous from an attack of diphtheria. During her illness at that time a cast of the vagina was passed and the attending physician's attention was called to this fact, but he ignored it entirely. Almost a year ago she commenced to feel unwell once a month, and had all the symptoms of a menstruating woman, except the flow, and she commenced to have a constant discomfort in the pelvis which grew worse and worse and was especially aggravated on each menstrual period, and this finally led the parents to seek medical advice for their daughter, and Dr. R. L. Thorp, their family physician, was called in and in turn called me in. The patient was sick-

ly looking, emaciated, but the external genitalia were perfectly developed, the finger could only penetrate about one-fourth of an inch into the vagina, where a perfect coaptation of the vaginal walls had occurred; the lower part of the abdomen was swollen and on precussing, dullness was elicited over both iliaë, the hypogastric and lower part of umbilical regions. A bimanual examination was made with a finger in the rectum and a tumor mass was found filling the whole pelvic cavity and extending almost up to the umbilicus.

We (Dr. Thorp and myself) decided to make a thorough examination under an anæsthetic and at the same time open up the vagina to let out the fluid of the tumor mass.

The following day, Sunday, we operated at her home, assisted by Dr. Fraser and a medical student, Dr. Fraser giving the anæsthetic. The patient was chloroformed and placed in the Lithotomy position, and under strict enforcement of asepsis, with a sound in the bladder as a guide and a finger in the rectum, the two agglutinated walls of the vagina were separated for a distance of about four inches, this was rather difficult on account of the small space between the rectum and the bladder, and we were in imminent danger of opening into either of these structures.

After having separated the walls of the vagina for the above mentioned distance, we found the tumor to be a fluctuating one. It lay in front of the vagina and above the bladder. The thick capsule of the tumor was incised and about a quart and a half of bloody fluid of a gelatinous consistency was withdrawn with no serious signs of collapse, the uterus was located inside the capsule and sounded and found to be rather small, its cervix was flattened, undoubtedly due to the pressure of the hæmatocolpos. The cavity of the tumor and the vagina was flushed out with a one per cent. solution of lysol, and then packed with ten per cent. iodoform gauze, a T-bandage applied and the patient placed in bed; her bladder was catheterized every six hours night and day, and on the third day the packing was removed. The bowels were now moved by an enema and the tumor cavity and the vagina repacked, and this was done every three days for about ten days, when instead of the packing, a tube of about one inch in diameter was inserted into the vagina and the opening of the capsule. The pulse and temperature kept about normal during the convalescence and the temperature never went above 100.

The patient is at present doing well, getting stout, and has menstruated several times since, the menstruation being normal in quantity and duration, but being unmarried the vagina has a tendency to close up in spite of the tube which is inserted every night as far as up to the cervix uteri.

**MEMORANDA *VIDE* THE SECOND PAN-AMERICAN
MEDICAL CONGRESS.**

By **W. P. MUNN, M. D.,**
Denver, Colo.

National and international medical congresses are a development of the last half of the nineteenth century. It is hard to say by what standards we may estimate their quality and determine whether or not they are successful. A congress which is regarded as a success by the delegates from one country is often regarded as a failure by delegates from other countries. Certainly the Pan-American Congress at the City of Mexico was a disappointment to many of the delegates from the United States, because many of the leaders of American medical thought were absent and their papers were consequently not presented. Some delegates have even gone so far as to make the same criticism as was made of the Congress at Rome several years ago, viz: that it was a scientific failure. It is doubtful whether the sense of individual disappointment felt by those who make such a complaint should represent the final verdict of the profession in regard to such a gathering. The published transactions of the Congress will probably present the papers that were not read at the sessions and a more perfect understanding of them will result than if they were considered in the hasty manner common to sessions where the rush of papers precludes any proper judgment of their merits.

The medical profession of Mexico may well be proud of the manner in which the Congress was handled by its representatives. There was a unanimous interest by the government, the profession and the people in all that concerned the Congress and in everything that could in any way contribute to its success.

I have never seen a scientific body entertained in a more magnificent manner. The social features of the occasion were planned with the most lavish and royal hospitality and carried out with a success that was not marred in a single feature. One hesitates long and finally fails to decide whether the most gorgeous reception was that of the President of the Republic at the historic castle of Chapultepec, upon that towered rock which our army carried by assault in the last days of that most brilliant and unjustifiable war of our history, or of the civic authorities of the City of Mexico in the Municipal Palace, (a building whose tasteful interior puts to shame the commonplace edifices that we fatuously designate by the term "City Hall"), or yet again when the hospitality of the Jockey Club threw open its doors and asked us to meet the fair and the fashion of Mexican society. Séñora Comancho, the English wife of the distinguished citi-

zen who holds the office of Mayor of the City of Mexico, opened her beautiful home one evening to those delegates who were accompanied by their wives, and a perfect evening of most delightful entertainment, interspersed with musical numbers of rare sweetness ended with a repast whose delicacy and beauty charmed the eye quite as much as its gastronomic perfection delighted the palate.

Among the other entertainments provided for the visiting physicians were several which combined pleasure and profit: The visit to the new general hospital now under process of construction; the inspection of the enormous abattoirs and garbage furnace just completed and not yet operated, and the trip to the drainage canal which is to relieve the surrounding valley of its swamps and lakes, remove the malarial influence from the otherwise almost perfect atmosphere of the city and make it one of the most desirable residence cities of America.

Dr. Edouard Liceaga, under whose charge the local arrangements were perfected, is to be congratulated upon the complete success which attended his efforts. Every delegate was enthusiastic in praise of the cordiality of their reception and the superb success of the local programme in every particular.

The formal opening of the Congress occurred on the evening of the first day in the National Theater. The enormous stage, which is at least one hundred feet deep, was occupied by the delegates; at each side were enormous reproductions of ancient Aztec images, while in the center and at the back stood a perfect fac simile of the old Calendar Stone of the Aztecs. Upon a raised dais in front of this were the gilded chairs for the President of the Republic and the ministers of Education and of Foreign Affairs. The decoration of the body of the house was superb; around the front of the four galleries, rising tier above tier, the national colors of each of the American nations were tastefully arranged; at each side, in the principal private boxes, decorated with their national colors, the ministers of the leading American and European nations were seated; red, white and green, Mexico's colors, were draped from the center of the roof while in the back center of the auditorium, the emblem of the Congress, the æsculapian snake drinking from a cup, was reproduced in the middle of a blazing sun-burst, fully thirty feet in diameter, of electric lights.

At half past eight o'clock the orchestra of a hundred pieces burst forth in the Mexican national anthem, the enormous audience rose to its feet and amid a tumult of applause welcomed the president of the republic, Porfirio Diaz, who marched down the aisle at the head of the officers of the congress, thence to the stage, where he delivered an eloquent address of welcome and formally declared the congress open.

There were many other speeches, but I think I do not transgress the limits of truth when I say that the oratorical gem of the evening was the address of Dr. William Pepper, of Philadelphia.

The scientific proceedings of the congress will appear at length in many of the eastern medical journals, and I will not concern myself with any attempt to comment upon them.

There are many obvious conditions in Mexico which challenge the attention of every physician who attended the congress. Easily the most important was the fact that in our sister republic no man is allowed to enter upon the study of medicine until he has a degree as bachelor of philosophy, and that thereafter he must spend five full years in attendance on lectures before he can secure a diploma. If any of us were disposed to regard the attainments of our profession in that country with an air of superiority, I think that this discovery at once disposed of it. The Mexican doctor is sure to be an educated gentleman, and it needed but little personal contact with them to persuade one both of their personal and scientific worth. I do not depreciate my fellow countrymen in saying that the medical profession of the country across the Rio Grande is fully abreast with us in scientific attainments, and ahead of us in some particulars.

One of the most pleasing experiences of the trip was a visit to the offices of the National Board of Health. There I saw such a bacteriological laboratory as it has not hitherto been my lot in life to see. Of course there are more perfect ones, but I have not had a chance to see them. There they carry on the examination of cases of diphtheria, tuberculosis, leprosy and rabies. They have a complete series of cords of rabbits inoculated with rabies since 1888, when Dr. Liceaga brought from Pasteur's laboratory the first specimen.

In the town of Guadalajara, which has less than 100,000 population, I was privileged to visit the civil hospital, an institution supported by the state. It has 1,000 beds and the number of patients in the hospital on the Sunday that I visited it was 571. This building is constructed upon lines somewhat different from any that I have ever before seen. Six great main wards radiate from a central court (or patio) and then from each of the main wards side ones are given off, and in some instances the extreme ends of the main wards are joined by transverse ones. The ceilings are not less than twenty feet in height while windows on both sides supply perfect ventilation. The instrumental equipment of the operating room was what might be termed lavish, and I could see no reason to doubt that modern surgery of the most approved kind was being practiced and taught there. The gynecologist showed us a case of uterine cancer and one of sarcoma of the

uterus, upon both of which he expected to perform vaginal hysterectomy during the succeeding week.

In the city of Queretara, and likewise at San Luis Potosi, the delegation of American doctors on the official train was accorded formal receptions by the governors of the states of which these cities are the respective capitals. In Queretara a delegation of local physicians met the train and spent the whole day in showing the visitors points of interest in their city. The town is of especial interest to tourists because it was the scene of the last battle, the capture and the execution of Maximilian. Many historic relics are preserved there and bring vividly to mind the events of that time when Napoleon the Little sought to overthrow a republican form of government in Mexico, as a preliminary to his proposed disruption of the United States.

One of the interesting medical facts observed on the side-trip to Tampico was the prevalence of malaria in some of the towns in the eastern portion of the republic. In one little town where we made a short stay we were told that there had been twelve deaths during the preceding night, this out of a population of 400.

It was interesting to note that while consumption is not of universal prevalence in those cities at altitudes of 5,000 feet and upward, that it is nevertheless present and there seems reason to believe that its occurrence is due to direct infection. This condition emphasizes the fact that altitude and dry air do not constitute such an absolute safeguard as to justify the infringement of natural hygienic laws or disregard of the discoveries of science.

One of the peculiar features of general practice in the City of Mexico is the fact that, on account of the large number of poor, all doctors set aside a certain number of hours of each day for the gratuitous treatment of poor patients, and a sign upon the doctor's window calls attention to these hours.

JACOB REED, M. D.

Jacob Reed was born in Philadelphia, Pa., September 5, 1839, and died at Colorado Springs, Colo., December 15, 1896.

He was graduated in medicine at the Pennsylvania Homeopathic Medical College, of Philadelphia, in 1861, and from the Jefferson Medical College in 1866. He also had a diploma from a St. Louis medical college. His father, from having money, lost his means, so that his son Jacob, still young, decided to study medicine and to support himself. He earned his way while studying by reporting for the Philadel-

phia *Press*. After graduating he went into the army for a three months' service, and when that time expired he enlisted, with a commission as lieutenant, serving altogether about two years. Later he located in the practice of his profession in Grand Rapids, Mich., where he met, and married, (1869) his wife, a daughter of the Rev. Francis H. Cumings, D. D., of the Episcopal church of that place. In 1870, hungry for the opportunities of a larger city, he returned to practice medicine in Philadelphia; and lived there until pulmonary trouble drove him to Colorado Springs, July, 1874. He occupied many positions of trust in the local and state medical societies, and for many years had been one of the Board of Trustees of the State Society.

Such is a brief sketch of some the events of Dr. Reed's life, but they tell us but little of the man himself, of the man we loved and honored. Said one to me, "His life was a struggle, and he did heaps of good." This was pre-eminently true. When he left Philadelphia, one of the foremost men in the profession, one whose name we all honor, told him that he could not live six weeks. It took him six weeks to come to Colorado, and he was brought all of the way on a mattress. From that day to the day of his death, his life was a struggle with disease, and in the latter years an affection of the heart complicated the condition in his lungs and really gave him more annoyance than the original trouble. Despite his physical infirmities, he made for himself a place, not only of local but of national prominence, in his profession; and his opinion, especially in regard to diseases of the chest, was widely sought and highly prized. To have done this in the full vigor of health would have been a credit to any life; to have accomplished it, hampered as he was by disease, makes it still more creditable. How wearily he dragged himself to his work, day after day, only those can tell who knew him closely. He not only worked, but he did "heaps of good."

It was not alone his aim to relieve physical distress and he was full of resources for the welfare of his patient's, but he sought to cheer and comfort and aid by wise and sympathetic counsel. In this respect Dr. Reed occupied a peculiar relation to his patients. They leaned on him to an unusual degree. He was not their medical adviser only; he was their councillor, their director, their friend. Nothing that concerned them was too small for his attention; nothing too trivial to call for his sympathy. His thoughtfulness for others was constantly being shown by the many little acts that are only prompted by the genuine heart.

He might at times be somewhat brusque himself, and one was frequently led to wonder if this manner were not an assumption to cover the real tenderness of the man; but one who had experienced it could

never forget the gentleness, the delicacy, the considerateness of his kindness and sympathy. This quality is something that comes from above. It cannot be taught. It cannot be acquired. It must be the prompting of a noble heart. It is inbred, and is not put on. It is what constitutes the flavor of a man. Jacob Reed was a man of fine flavor. He thought nobly. He aimed to think truly. He had an abhorrence of shams, and was a great lover of directness. It was for this reason that, when he became convinced of the error of his position in his early medical life, a position that was probably due to association, he changed to that which he believed to be true.

Although he was positive, he was not bigoted. He had a mind open to the truth, and was ever ready to be convinced. Retiring by nature, and never desirous of prominence of any sort, he was, nevertheless, decided and left no question of his position. There was no shilly-shallying. His fondness for everything good and true was marked. Good in music, literature, art, found in him a sympathetic cord, an every ready response. The keenness of his appreciation, the delicacy of his judgment, were a delight to his friends. He was an ardent lover of nature and one thinks of him surrounded by his plants and flowers, which he tended so carefully.

The latter years of Dr. Reed's life were rendered lonely by the enforced separation from his wife and boy. The son, now twenty-two years of age, was found to have an enfeebled heart, which obliged him to live at a lower elevation, and as the doctor was compelled to live here, it involved a separation, painful to all concerned, but especially to the father, to whom this son was as the apple of his eye.

Dr. Reed was human. He had his faults. To some these were so pronounced as to obscure everything else. Not so, however, to those of us who knew him more closely—who knew of his generous nature, his broad mind, his tender sympathy, his ready response, his genuineness.

He was a man whose life abounded in good deeds for others, and whose death is a loss to the community, and to the many left to mourn him.

S. A. FISK.

The meeting of the southern section of the American Laryngological, Rhinological and Otological Society occurs at New Orleans, March 3rd and 4th, 1897.

At the annual meeting of the Denver and Arapahoe County Medical Society, on January 12th, Dr. W. A. Jayne was chosen President, Dr. E. P. Hershey, Vice President, Dr. C. D. Spivak, Secretary, Dr. J. M. Blaine, Financial Secretary, and Dr. E. J. Rothwell, Treasurer.

The Denver and Arapahoe Medical Society.

The first meeting of the last month of 1896 was held Tuesday evening, December 8th, at the Brown Palace Hotel. The attendance was small, only the following members being present: Drs. Levy, Blaine, Black, Richardson, Spivak, Hassenplug, Beggs, Hall, Hopkins, Sewall, Thomas, Jacobs, Chase, L. Freeman, Schollenberger and Axtell. Mr. J. C. Dana, of the Public Library, was the guest of the Society. There was no routine business to transact, and the regular program was taken up. Dr. C. D. Spivak read his paper, entitled "How the Library of the Colorado Medical Association May Double the Number of its Volumes Without Making any New Purchases. A Suggestion." The nature of this suggestion was presented in an editorial in this Journal in December. It proposed making the private medical libraries of Denver, through voluntary co-operation, a part of the library of the Association.

Discussing it Dr. Sewall said that the plan was simple and efficient and that the officers of the Library would be willing to accept it if the profession here would do its part. He thought that the question of borrowing another physician's book would depend largely upon the temperament of the physician doing the borrowing. Concerning the question of limiting the books to the journals, he thought it wise for the present. He did not believe that the profession of Denver had taken up the Medical Library in the spirit of enthusiasm that it should.

Mr. Dana was called upon to consider the matter and said that while he saw many technical difficulties in the way, that they were not insurmountable. Some such plan was already followed in other cities in regard to periodical reading. Whether such a plan could be introduced here depended somewhat upon the physicians. The doctor who would frame a list of his books, or who would attend to revising a list sent him, would be unusual. He thought it would be necessary to send some one to do this work. With each physician consulted, a new list would have to be revised. He wanted to thank Dr. Spivak for his suggestion, and said the matter would have his consideration.

Dr. Hall commended the paper, and said that he would be glad to loan any book which he had in his library, as he had received many favors of that kind from other members of the profession. He spoke of the medical library under Mr. Dana's care and said that he was much pleased at the freedom which had been extended to him in the use of the library's books.

Dr. Axtell next reported a series of clinical cases. The first was an old man, aged seventy, who had erysipelas and who recovered from it entirely under protonuclein, to have ten days later a double

pneumonia, from which he died. Portions of the solidified lungs as well as the kidneys, which were interstitial and presenting cysts, were exhibited.

He next referred to an array of cases of follicular tonsillitis, and reviewed a treatment which had been successful in his hands, namely, Wyeth's tonsillitis tablets, one every fifteen minutes for two to four hours with sodium salicylate in full doses for the first few days, all treatment to be preceded by an active cathartic. Locally he used a spray of peroxide of hydrogen and externally applied camphorated oil.

He exhibited a temperature chart of a typhoid case which ran over a period of fourteen weeks, the case, however, making a perfect recovery. The patient was a young girl, aged fourteen, and the temperature chart showed many variations over the usual chart. A relapse at the end of nine days was apparently due to an eggnog. He advanced the following theory for such relapses: "Does not food in producing relapses act in this manner—does it not dilute, neutralize or lessen the formation of the antitoxin which the body has produced? This patient's temperature went up within three hours after the ingestion of the eggnog. It had not time to reach the ileum and produce mechanical or chemical irritation. I believe it was absorbed and diluted or neutralized, the antitoxin floating in the blood and the typhoid germs as soon as this occurred again assaulted the body tissues, and successfully."

His reports of cases were discussed by Drs. Richardson, Sewall and Freeman. Dr. Richardson had obtained good results in follicular tonsillitis by giving the ammoniated tincture of guaiac, in drachm doses every four hours.

Dr. Sewall had seen relapses in typhoid fever a week or two weeks after the temperature became normal, and they followed every kind of a diet; eggnog, which he thought was especially apt to cause them, beef broth and toast. He did not believe that it was necessary to go into the antitoxin theory to explain relapses. By using analogies it would answer. If one had lived on a ranch diet and was then put into the Brown Palace Hotel, he would be apt to have a colic. Nature measures relations. Given a typhoid patient living on milk, and then increase his diet, and it is hardly any wonder that he has a relapse.

Dr. Freeman wanted to consider the erysipelas case. Personally, he did not believe erysipelas to be as dangerous a disease as it was commonly thought to be. He had seen a number of cases which recovered without complication. He did not believe that any one drug was of especial value in this disease.

Dr. Sewall reported a case of a man who had erysipelas of both

legs. On one leg he used a solution of ichthyol, on the other a solution of mercuric bichloride. Neither application was of much service, but if anything, the ichthyol proved to be the better application.

Dr. Axtell took exception to Dr. Sewall's explanation of relapses. He did not believe that the simple addition of one article of food to the diet of a typhoid patient ought to be responsible for a relapse lasting ten days. The dilution of the antitoxin, or its lessened secretion, *could* account for such trouble. For as soon as this was insufficient to protect the body tissues the germs increase in number, and it might be days or weeks before the proper balance was secured.

As regards local applications in erysipelas, he did not believe that any good could be secured by any such medication. They could not be absorbed with impaired function of skin, and they could not reach the germs which were down in the subcutaneous tissue. He used vaseline, because it made the inflamed area more comfortable to the patient.

Dr. Freeman reported for the Executive Committee that nothing definite had been arranged for as regards the question of a room at the Public Library. The room formerly occupied by the Society could no longer be used.

The President called attention to the fact that the members who had moved and seconded that this matter be considered at this meeting were both absent. On motion the matter was again referred, and the meeting stood adjourned.

* * *

On the evening of the 22nd the Society held its second meeting. This time not in the club room but in the ordinary. As no previous notice of any change had been given, several members who are not rapid enough to keep up with the checker-like moves of the assembly hall, went away under the impression that no quorum was present and that the meeting had been adjourned. A large array of members was present however, attracted by the strong program offered by the Executive Committee, apparently without the consent or knowledge of the speakers of the evening, for of the five men who were to speak on a symposium of Brain Surgery, only one was present and he is a member of the Executive Committee.

After the minutes were read and approved, the President, Dr. Levy, made apologies for the Committee, and introduced Dr. Hall, who presented a phonendoscope, which he had modified for class work so that three students might listen to a chest sound at one time.

Dr. Leonard Freeman next reported an amputation at the hip-

joint for osteo-sarcoma of the femur in a man of forty-five years. Wyeth's method was employed. Hæmorrhage was very slight, shock was insignificant, and the patient was out of bed within three weeks. The tumor, which was just above the left knee, dated apparently from a severe bruise received between twenty-five and thirty years previously, a distinct tumor having existed at least eighteen years, with pain at intervals prior to this. At one point a needle could be passed through the envelope of thin bone into the central sarcomatous mass. Shortly before the operation a spontaneous fracture of the bone occurred during the night without the patient's knowledge.

Contrasted with the above was the case of a man of about thirty who had injured the thigh above the right knee eight years previously. Since then moderate thickening of the bone had existed with periodical swelling and induration of the soft parts. Incision demonstrated the presence of a superficial recurring osteomyelitis with a small quantity of pus.

Thus, contrary to what might be expected, the older man had the disease which should have developed in the younger one.

The Doctor exhibited the specimen taken from the case with amputation.

It was moved and carried that the courtesies of the floor be extended to Dr. Hawes and to any other visiting physician.

Dr. Lobingier asked if sections had been made of the tumor. He thought it was probably a myeloid sarcoma, as such tumors choose this location more frequently than pure osteo-sarcomas which usually grow from flat-bones. Then the duration of the tumor's development indicated slow malignancy, which was characteristic of the myeloid growths and especially those from the endosteum of bones.

Dr. Spivak doubted if it was possible for a malignant tumor to be present and remain local for the length of time that the first case was stated to be. He thought the growth was probably non-malignant at first, but that it took on malignancy. He cited cases where carcinoma developed upon the site of an ulcer or at the site of a known tumor.

Dr. Jesse Hawes, of Greeley, took exception to the statement that a malignant tumor must necessarily prove fatal in a short time. He knew of a case of carcinoma, where the diagnosis was absolute, which persisted for over fifteen years. He thought that many cases of osteo-sarcoma were cases of osteo-myelitis. He cited the case of a boy six years of age who received an injury to his knee and who, in the course of time, presented a growth to the inner side

of the knee, which growth he, as physician, pronounced "osteomyelitis," but which was pronounced by a Denver surgeon to be an osteo-sarcoma. The case came back to him, and by breaking the femur over he got the knee straight and the case did well with a useful leg.

Dr. Pershing asked if any of the members had tried the toxins of erysipelas for inoperable cases of sarcoma.

Dr. Richardson stated that he had seen two cases in which erysipelas had modified the progress of a cancerous mass. A man, fifty years of age, with cancerous cachexia and obstruction of the pylorus, had erysipelas and for some time after the attack he had but little trouble, whereas before, he had had a great deal of trouble. The case passed out of his care. The second case was a woman with a cancer of the breast in which the introduction of the serum and the subsequent development of the erysipelas had greatly modified the progress of the disease, which however proved fatal. He spoke against the use of the drainage tubes in amputations, where they could be avoided. He thought they spoilt aseptic technique.

Dr. Freeman closed the discussion. He said that owing to the great amount of seepage in an amputation of the hip that a drainage tube was absolutely necessary. Speaking of "osteosarcoma," he thought that we could apply that term to any sarcoma occurring in connection with bone.

The use of the erysipelas antitoxin in inoperable sarcomas had been extensively investigated by Coley and his results had not been brilliant. He cured a few cases and helped a few. The speaker had tried it without any results. He spoke of a case in a Cincinnati hospital; an old man with a sarcoma developed erysipelas. In five or six days the tumor sloughed and a portion, the size of a fist, fell out and the tumor got smaller, but the patient did not recover. In another case, a woman with involved carcinomatous axillary glands, after an attack of erysipelas lived three years.

He thought that malignant tumors might exist almost indefinitely without causing death. He knew that they might get well spontaneously.

Dr. H. G. Wetherill exhibited and explained the workings of his new and remodelled portable sterilizer. This has already received a notice in the columns of the JOURNAL.

The discussion of the question as to what attitude the medical profession should take toward malpractice suits was next considered. It was discussed by Drs. Powers, Richardson, Hall, Lyman, Mann, Hawes, Chase, Hershey, Lobingier, McLauthlin, Grant and

Leavitt. It was moved that a committee be appointed by the chair with the chair to be a member of the committee, to prepare a bill for the legislature which might, by requiring an indemnity bond from a plaintiff, prevent some of these malpractice suits. President Levy has since appointed the following committee: Drs. Fleming, Rogers, Pershing, Pfeiffer and Levy.

Dr. Leonard Freeman brought forward the question of a mutual protective association for physicians. With a membership of 200, and an annual fee of \$10, a large sum of money would soon be at the disposal of the members, for use in malpractice suits. Such a sum always ready to defend such suits would deter many from bringing malpractice suits.

It was moved and carried that a committee be appointed to consider this matter. This committee was appointed: Drs. L. Freeman, Hall and McLauthlin.

The following members were present at this meeting: Drs. Levy, McLauthlin, Charles A. Powers, Hopkins, Dorland, Gibson, Burns, E. J. Rothwell, Pershing, Black, Spivak, Ziederbaum, Macomber, McNaught, Hawes, J. M. Perkins, Liebhardt, Sewall, Jeffery, Richardson, Lyman, Fleming, Hall, Grant, Blaine, Simon, Lobingier, Malaby, Depcyre, Rivers, Leavitt, Hassenplug, Thomas, Johnson, J. J. Powers, Huffman, I. B. Perkins, Hershey, Wetherill, Mann, L. Freeman, Chase, R. Freeman and Axtell.

The Denver Clinical and Pathological Society.

A regular meeting of this Society was held in the office of Dr. W. P. Munn, December 11, 1896.

The President, Dr. Clayton Parkhill, was in the chair. The minutes of the meeting held November 13, 1896, were read and approved.

Drs. W. W. Grant and S. T. Jarecki were guests of the Society, and on motion were invited to participate in the proceedings of the Society.

Dr Powers offered the following resolution, which was carried:

"Resolved, That the members of the Denver Clinical and Pathological Society, being familiar with the details of the suit of one James Smith against Dr. W. W. Grant, of this city, and being conversant with the circumstances attending Dr. Grant's examination and treatment of said Smith, affirm their belief that Dr. Grant's examination and treatment of Smith were in every way proper and correct, and in accordance with the best teachings of modern surgery."

Dr. Munn moved that a committee of three be appointed to con-

fer with the Bar association in regard to the adoption of a rule of procedure as to the disbarment of attorneys who participate in blackmailing suits. Passed. Dr. Parkhill appointed Drs. Munn, Wetherill and McNaught.

Dr. Leonard Freeman moved that a committee of three be appointed to investigate the feasibility of forming a protective association to defend worthy physicians against blackmailing suits. This motion was amended to the effect, that this committee be instructed to confer with other possible committees appointed from other societies. The amendment was accepted, and the motion was passed. The President appointed Drs. Hershey, Jayne and Axtell.

Dr. Waxham reported, with exhibition of specimens, five cases of membranous diphtheria. These casts were obtained by intubation. He also exhibited a large cast of one of the nasal cavities.

Dr. Edson reported an incident where the mixture of morphine, salol and camphor which, instead of producing the usual clear syrupy liquid, resulted in a brown paste.

Dr. W. W. Grant reported three cases, in each of which was a small tumor in the crico-thyroid space. Two of the cases were children and one was a young adult. The tumors were decided to be bronchial cysts. Discussion by Drs. Parkhill, Freeman, Powers and Grant.

Dr. Hall exhibited a phonendoscope. Discussion by Drs. Hershey, Parkhill and Hall.

Dr. Freeman reported an unusually difficult case of ununited fracture of the arm near the shoulder treated with bone clamps devised by Dr. Parkhill. The results were very satisfactory. Discussion by Drs. Parkhill and Freeman.

Dr. Hershey reported a case in which the passage of renal calculi was greatly aided by taking about a pint of olive oil a day. The stones were exhibited. Discussion by Drs. Axtell, Powers and Hershey.

Dr. Munn reported a case of operation where a combination of the supra pubic and perineal operations greatly aided in the removal of growths from the bladder.

After a lunch the Society adjourned.

The following gentlemen were present: Drs. Axtell, Black, Edson, Fleming, Leonard Freeman, R. B. Freeman, Hall, Hershey, Hill, Hopkins, Jayne, Levy, Macphatter, McNaught, Munn, Parkhill, Powers, Walker, Wetherill and Waxham.

LEWIS M. WALKER, *Secretary.*

The Practitioners' Club.

The Practitioners' Club held its regular meeting December 1, 1896, at the office of Dr. Carl Johnson, with the following members present: Drs. Case, Jacobs, Taussig, J. J. Powers, Macomber, Thomas, Johnson, Rover and Richmond.

The regular paper of the evening was by Dr. H. W. Rover, on "Some Therapeutic Suggestions in Scarlet Fever." The especial line of treatment advocated was by hot baths, a plan which in an experience of about one hundred cases had been unattended by a single death. The cases ranged from mild to severe forms. In the discussion which followed on the part of all present, it appeared that the plan had been followed as a regular method sufficiently to justify comment, either favorable or unfavorable.

The next regular meeting of the Practitioners' Club was held on December 15, 1896, at the office of Dr. Case. Members present: Drs. Case, Macomber, Powers, Bradner, Taussig, Johnson, Field, Thomas and Van Zant.

Dr. A. S. Taussig presented the topic of the evening, "Gastric Diseases and Examination of Stomach Contents." The paper went into the details of the different functional organic diseases of the stomach and gave illustrative cases. Afterward the doctor illustrated practically the methods of chemical examination of the gastric contents; estimation of total, free and combined acid; of motor insufficiency and rapidity of absorption, etc.

The appropriate treatment and dietetics indicated, as a result of the definite chemical examination of the stomach contents, were then taken up in detail.

The general discussion which followed was participated in by all present, and showed the increasing interest of the general practitioner in these exact, scientific methods, and covered a large range, including lavage, etc.

C. B. VAN ZANT, *Secretary*.

Woman's Clinical Society.

A regular meeting of the Denver Clinical Society was called to order by the President on December 1, 1896.

The Secretary reported a balance of \$3.50 in the treasury. A short financial discussion followed.

Dr. Minnie C. T. Love read a very interesting paper on "Hysteria," with report of cases. In the doctor's opinion a large percentage of hysterical cases require gynecological treatment.

In the discussion which followed, Dr. Lawney reported a curi-

ous case, which very closely simulated appendicitis, afterwards proved by explorative incision to be one of hysteria. Inversion of the feet was one of the curious symptoms. Osler's rise of temperature was dwelt upon as being present extending over a period of five years, temperature varying from 101° to 103°. The fact of hysteria being present in diseases of the left hemisphere was spoken of to be verified or not, by future observance.

Many other cases of much interest were reported by other members of the Society.

Adjournment took place at 9:45 p. m.

M. JEAN GALE, *Secretary*.

Denver Medical College Alumnae Society.

During the month of December no meeting was held, but beginning with January regular meetings are to be held at the offices of Drs. Durbin, Seebass and Johnson. With the meetings there will be served a lunch, and a strong effort is going to be made to make the attendance all that could be desired.

The first meeting of this year was held at the office of Dr. L. T. Durbin. A full report of this meeting will appear in our February number.

Letters to the Editor.

To the Editor of THE COLORADO MEDICAL JOURNAL:

My attention has been called to an item in the editorial columns of THE COLORADO MEDICAL JOURNAL for November, in which another periodical is quoted as publishing that "The Colorado State Board of Health is now recommending the regulating, or exclusion of consumptives in that state." I am in a position to know that the State Board of Health has done nothing of the kind, and you need not have expended much effort in becoming equally well informed. The only basis for the statement that I know of is to be found in a paper on "Consumption Contracted in Colorado," published in the *Colorado Climatologist*, and in a committee report made by me, as chairman, to the Colorado State Medical Society in 1895. In neither publication was the exclusion of consumptives from this state proposed. For both productions I am individually responsible, and the State Board of Health is in no way involved.

I trust that this correction may find as wide a circulation as the original statement. Yours very respectfully,

HENRY SEWALL,
Secretary State Board of Health.

To the Editor of THE COLORADO MEDICAL JOURNAL:

From a discussion on Pediatrics in the *Medical News* of November 28, 1896, page 617, I quote the following: "In collecting the urine of children for examination the best plan is to use a small silver catheter; for squeezing urine out of a diaper or sponge is too crude a method."

In this connection I believe that the plan I have followed for several years, in the case of male infants, is not only as practical but wholly devoid of the obvious danger to be apprehended from passing a solid catheter, and I am impelled to suggest it because I have never seen it mentioned. I push a small rubber condom over the penis up close to the child's body and hold it there with a small rubber band, which I first double on itself around my little finger to test the pressure. Of course, the band should be placed as high as possible. Five-sixths of the condom drops down between the child's legs and is further held in place by the diaper. No interference in the circulation of the organ occurs and the quantity of urine voided can also be ascertained. Very truly yours,

L. B. BRASHER.

* * *

From New Gretna, N. J., we get the following letter from Dr. R. G. Blow, a graduate of the Denver Medical College, 1896:

My Dear Dr. A—

* * * Now for the case that I have on hand at present. It is an old lady, seventy years of age, who since last spring has been complaining of abdominal and lumbar pains, diarrhoea and extreme weakness. Not until September was it discovered that she had a rectal abscess. This was discovered by an M. D. who was attending her during my absence from town. At first there was a discharge of pus and blood, but in about a week afterward pieces of material resembling (to me) bone passed with her evacuations. This continued for six weeks, and at last I diagnosed the case, extra-uterine gestation.

I called in an old practitioner, and he confirmed my diagnosis. The foetus must have been inside of her for twenty-two or twenty-three years. About twenty-two years ago the woman remembers having had pain in the lower abdominal region, and a protrusion, which she says was pronounced ovarian tumor. This lump has existed ever since that time, but since the discharge of these pieces of bone has greatly diminished in size. She also discharged pieces per vagina, but we can find no fistulous communication between the vagina and rectum. She has passed by both canals, within the last two months, five or six vertebræ, two pieces that resemble the scapulæ, the tibia and fistula of both legs, fifteen or

more pieces of ribs (some nearly whole), pieces of the femur, a number of heads of long bones, pieces of skull, etc. Most all the pieces now being discharged come by way of the vagina. Lots of debris, resembling dried coagulated blood, pass. I suppose this is the placenta and tissues. If the woman was young, I think there would be no doubt of her recovering, but her seventy years are against her, of course. She is doing nicely, however, and seems to be comparatively comfortable.

I wrote to Professor Hust, of the University of Pennsylvania, and he said he had never heard of but one case similar to it. He was very much interested. * * Very sincerely yours,

R. G. BLOW.

* * *

The following is an extract from a personal letter from Dr. Hannah Taylor-Muir, who, with her husband, is now in Paris, France:

"After seeing Vienna and the teachers there, all I have to say can be said in a nutshell. They exceed us in number of patients, and in the liberty one can take with the examination of patients, but I think the Americans are brighter. For pathology and numbers Vienna is ahead. I tell Dr. Muir that the United States need not be afraid to go to war with any other nation because the Americans could shoot twice while the other people were getting ready to shoot. * * *

"In Vienna they have their courses arranged for a month and five weeks, and there are so many American students there that many courses are given in English. We were there over seven weeks, and had a fine time. Some of the Americans did not relish me exactly because when they would praise something immoderately and most of them being from some Eastern school in America, I would tell them we could beat that all to pieces in Denver! I am more of an American even than before I left Denver, and the United States is good enough for me!"

News Items.

Dr. C. B. Lyman is in Chicago.

Dr. Jesse Hawes, of Greeley, was in Denver in December.

Dr. Lyman M. Ellis, of Denver, is now visiting in California.

In December Dr. H. T. Pershing was in Kansas on professional business.

Dr. J. T. Reed, of Colorado Springs, has been a recent visitor in Denver.

Dr. E. F. Marscheider, of Denver, is visiting his parents in New York City.

Dr. Ada M. Chevaillier, of this city, is soon to go abroad for a protracted stay.

Dr. Maxwell, of Castle Rock, visited Denver for a few days during the holidays.

Dr. J. B. Devlin was in Chicago in December. He got home in time to spend Christmas with the babies.

The sisters of St. Anthony's Hospital entertained the hospital staff of physicians at the annual banquet last month.

Dr. Alpha Chase and Dr. Mary Shreve, who were classmates in the class of '93 of the State University, were married last month.

Dr. L. E. Dawson, of Creede, Colo., surgeon of the D. & R. G. Railway, has offered his services as regiment surgeon of Cuban volunteers.

Dr. and Mrs. LeMond entertained the faculty and students of the Gross Medical College very pleasantly on one of the holiday evenings.

Doctor (on second visit to see a boy who had swallowed a dime, a nickel and a copper cent)—How is the boy this time? Anxious Mother—No change yet.

Dr. LaBrie, who in the early days of Denver was city physician, has disappeared from his home in Chicago, and a search is being made for him throughout the country.

At the annual meeting of the Retail Druggists' Association, held at the Albany Hotel last week, our good friend Mr. E. L. Scholtz was elected president of that organization.

Dr. W. W. Reed, of Fowler, Colo., was in Denver on the first of the month and, as all the progressive physicians of Colorado do, ordered THE JOURNAL sent to his address during 1897.

A lodge of the Home Forum Benefit Order, of Chicago, was organized in Denver some time ago, with two of our medical men, Dr. P. D. Rothwell, secretary, and Dr. Sheets, physician to the lodge.

Dr. C. E. Tennant, Sr., read a paper on "Scarlatina" before the Denver Homeopathic Society at their last meeting. The members showed interest in the subject, and several of the doctors discussed the paper.

At the meeting to discuss the new city charter Drs. Sewall, Blickensderfer, Denison, McLauthlin, Munn, Eskridge, Fisk, Brace, Rogers, J. M. Walker and Freyermuth represented the physicians of Denver.

Word comes from Conejos county that the missing Dr. Eugene F. Storke, of Denver, secured a divorce from his wife in that county last July, before going on his trip to Mexico. As yet he has not been heard from.

Dr. W. C. Davis, of local bicycle road race fame, has gone to Chicago to practice a few new tricks, and to look up the question of a bicycle motor. Incidentally he will take a needed rest and visit his relatives.

Dr. J. T. Eskridge, after eight years of continuous service at the Arapahoe County Hospital, has severed his connection with that institution, much to the regret of his fellow workers and those connected with the hospital.

Dr. T. A. Stoddard, of Pueblo, recently won his suit against that city, receiving a verdict of damages. Owing to a defective street he was pitched from his carriage and received a fracture of the spine of the seventh cervical vertebra.

Dr. C. D. Spivak, of this city, sends us a large bunch of interesting reprints. Dr. Stuver, of Rawlins, Wyo., also remembers us. To Dr. Leonard Freeman we are indebted for a reprint on "Congenital Diverticula of the Bladder."

Dr. J. K. Morris, of this city, had a rain of misfortune in December last. He has his Encyclopedia Britannica stolen from his office, and a few days later he met with a severe sprained wrist. He will have to get a "rabbit's foot."

The Microscopical Society has reorganized for systematic and scientific study, and it is proposed to co-operate with the newly organized State Historical and Natural History Society. Dr. J. B. Kinley is secretary and treasurer of the reorganized society.

Dr. T. H. Hawkins, at the last meeting of the Colorado Medical Library Association, was chosen President to serve during the year 1897. Dr. J. W. Graham, the retiring President, provided a very pleasant lunch, which was served at the close of the meeting.

Dr. A. A. Clough, of this city, is among the first to appreciate the necessity of a dustless street sweeper and he accordingly invented such a machine. We hope to see it in general use on the streets of Denver, as the machines now in use are simply dust raisers.

The Western O. O. L. and R. Association, which means Eye, Ear, Throat and Nose Association, is going to meet in St. Louis in April, 1897. Colorado physicians, through us, are cordially invited to take part in this meeting. Dr. Hal Foster, of Kansas City, is Secretary.

For February we will present articles from a host of our good

friends: Drs. Lobingier, Holmes and Seebass. For March we have been promised articles from Drs. Eskridge, Waxham and Stover. You will miss a great deal if you are not a subscriber to this Journal.

Lea Brothers and Company announce that they have in press "A Handbook of Medical Climatology," by one of our collaborators, Dr. S. E. Solly, of Colorado Springs. It is to be a handsome octavo volume of 500 pages, with numerous maps and illustrations. We are proud of Dr. Solly.

Our esteemed collaborator and contributor, Dr. G. H. Stover, leaves next week for a three months' visit in New York, Baltimore and Philadelphia, where he will store away on his brain cells all the latest and best medical knowledge. Dr. Stover is a young and an enterprising physician, whose future is destined to be very bright.

Dr. Persifer M. Cooke, of this city, one of the state legislators, makes a very efficient chairman of the legislative committee on medical affairs and health. Although a homeopathist, Dr. Cooke has a large number of friends in the regular medical profession and is universally esteemed as a man of broad views and pronounced culture.

Dr. Frank Rhoads, the smooth young physician who advertised so extensively in the daily papers, and who disappeared with a neat sum of his landlady's money she had asked him to collect for her, is in jail in Chicago charged with bigamy. Besides this crime and the charge of embezzlement which the Denver police have against him, he is said to be wanted in other places for forgery.

A subscriber sends us the following doggerel on "Cremation":

"A thought for the welfare of our relation,
A subject, in fact, of much speculation,
A theme, as well, for a grand oration,
A noble monument to sanitation,
A cheap disposal of men of all station,
But it won't save a soul from hell and damnation."

This is not by the "Boy Poet of the Rockies.

Anyone entering a physician's office these days cannot fail to have his attention drawn to the unique calendars which the Antikamnia Chemical Company have distributed so generously. The pages represent a series of skeleton sketches which are reproduced from the original water colors, the work of an artist from the ranks of the profession—Louis Crusius, M. D. It is very cleverly gotten up and is characteristic of that enterprising firm.

Dr. John Elsner, of this city, after many years of collecting and arranging mineral specimens, has sold his famous collection to the state, through a private subscription. Each specimen is set

upon a small wooden block, covered with black velvet, and labeled according to its kind. The range of variety takes in everything appertaining to the mineral kingdom found in Colorado—from diamonds to coal. His collection has attracted a great deal of attention. It will soon be arranged for the public at the state capitol.

The Board of Health of Philadelphia, Pa., has placed notices on the street cars of that city forbidding spitting on the floor. The same board furthermore has petitioned the city council to pass an ordinance making it a misdemeanor to spit on the floor and punishable by a fine of \$5. It would startle some of those old Eastern towns to know that Denver was one of the earliest cities in this country to place "No spitting on the floor" signs in its street cars. We regard the question of a fine for spitting on the floor as totally unnecessary. It is not needed here.

The following efficient corps of physicians and surgeons have been appointed on the staff of the County Hospital for 1897: Medicine, Drs. H. W. McLauthlin, Henry Sewall, S. A. Fisk, H. B. Whitney, W. J. Rothwell, E. P. Hershey and N. G. Burnham. Surgery, Drs. E. J. A. Rogers, Leonard Freeman, Charles A. Powers and Clayton Parkhill. Obstetrics, Drs. T. E. Taylor, Laura L. Liebhardt and F. H. McNaught. Gynecology, Drs. T. H. Hawkins, W. S. Bagot and W. A. Jayne. Diseases of Eye and Ear, Drs. John Chase and R. F. LeMond. Genito-Urinary Diseases, Drs. Hugo Mager and W. P. Munn. Nervous and Mental Diseases, Dr. H. T. Pershing. Diseases of Nose and Throat, Dr. Robert Levy. Pathologist, Dr. E. R. Axtell. Dentist, Dr. George J. Hartung. Microscopist, Dr. William N. Beggs.

The *Medico-Legal Journal*, of New York, for September, 1896, has a great deal of interest in it for some of the profession here. Dr. H. G. Wetherill's editorial on "The Medical Agnostic" is in large part reproduced from the *Western Medical Review*. Dr. J. N. Hall receives two comments. One on his knowledge of gunshot wounds, *i. e.*, "Dr. Hall is one of the highest authorities on gunshot wounds in this country." The second comment Dr. Hall has tried to suppress, but our news gatherer was too clever. Dr. Hall has never reached out for honors as an abdominal surgeon, in fact has never opened an abdomen, but in the face of this he receives this comment in a paper entitled "The Future of Railway Surgery:" "In 1861 a gunshot wound of the abdomen was regarded as almost necessarily fatal; to-day, as illuminated and illustrated by surgeons, Nicholas Senn, J. N. Hall and other masters of this branch of surgery, an explanation would be rightfully and lawfully demanded of the surgeon who lost such a case, of the reasons of his failure." Dr. Hall wonders if the first comment is of equal value with the second.

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SUCCESSOR TO
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A Monthly Journal for the Medical Practitioners of Colorado and Adjoining States.

EDWIN R. AXTELL, M. D., EDITOR.
E. A. SHEETS, M. D., MANAGER.

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NO. 1.

Editorial.

The Western Surgical and Gynæcological Association.

Through the efforts of Dr. W. W. Grant, of this city, the first meeting of the Western Surgical and Gynæcological Association ever held in the far west, will be held in Denver during the holidays of 1897-8. This meeting will bring together many eminent gynæcologists, and is an important one for Denver, and we have Dr. Grant to thank for his successful efforts in bringing it here.

† † †

Another for the State Board of Health.

Colorado mountain resorts have furnished so many cases of typhoid, mountain and malarial fevers in the past two years that it is positively dangerous to visit many of them. The epidemics all seem to be due to a contaminated water supply. Few people will care to take the risk another year of going into Colorado, but will seek mountains which are like those of Colorado, naturally healthy, but where the water supply has been undefiled.—*Editorial in Kansas Medical Journal.*

† † †

Colorado Medical Library Association.

Dr. Leonard Freeman has recently called our attention to a plan whereby the Colorado Medical Association might profit. The clinical lectures at the Arapahoe County Hospital are deliv-

ered entirely by members of the Association who give their time to this work without compensation. If a small fee of \$1 per student be charged for the entire course of lectures a sum of several hundred dollars might thus be annually raise for the Library Association. It is certainly to be commended, as it works no hardship on any one, but is equable and just to all concerned.

† † †

You and Our Advertisers.

We want you to look over our advertising pages carefully. You will find polite messages to you from our old friends, with earnest messages from a host of new ones. You will be surprised at the number of new advertisements we have added since our December issue. It took a great deal of energy to collect so large a number. We are anxious that each advertizer shall derive full value during the coming year. This depends upon you. As progressive physicians you ought to read medical advertising. These firms appeal to you because they have something which will contribute to your success as a practitioner. Not a single advertisement has been accepted, but from a reputable and scientific house. Turn the leaves slowly and read the advertisements. They are attractive, interesting and valuable.

† † †

One Dispensary for Denver.

Dr. Landon Carter Gray, of New York City, in a recent address showed by carefully compiled statistics that over 793,000 persons had received free medical treatment in the hospitals and dispensaries of that city in 1895. This is 39% of the total population of the metropolis.

Here in Denver this evil is growing just as rapidly as it can, and only a feeble voice is now and then raised against it. What a simple matter it would be at this time to stop this evil. Let the officers of the medical schools get together and close their dispensaries. Then let them arrange to have *one* dispensary for Denver, and that in connection with the County Hospital. The details of such a simple move need hardly to be mentioned.

Why do medical men allow their ambitions and petty schemes to dull their business sense?

† † †

New Cure for Diphtheria.

Colorado has a genuine curiosity in the person of a woman physician who does not believe in prescribing drugs for any complaint. She is a firm partisan of climato-theory, and through her misguided efforts a whole family was recently sent East as a cure for diphtheria. Her methods did not come to the attention of the authori-

ties until the health officer of Chicago wrote asking for information and demanding if the use of *tuberculin* was unknown in the wild and woolly West. The Denver health officer hastened to investigate, and discovered the truth of the story as told. He also learned that several other families had contracted the disease from the children, who were the first afflicted, and his timely arrival was all that saved them.—*From American Medico-Surgical Bulletin.*

The facts of this case are as follows:

A homeopathic woman physician in the town of Littleton failed to recognize the nature of a case of diphtheria, and permitted the family whose child had died of it, to continue their journey East. Another child came down with the disease when near Chicago, and a regular physician being called in, at once recognized the case and reported it to the Chicago Board of Health. I have no knowledge of any communication from the health officer of Chicago in reference to the matter, nor can I believe that he advocates the use of *tuberculin* in the treatment of diphtheria.

It is true that from a public funeral of the unrecognized case in the town of Littleton there were several cases of the disease contracted, and that two of these cases were in children who lived in Denver.

All of which emphasizes the fact that I have time and again reiterated—that a doctor who imagines himself or herself capable of *always* correctly diagnosing the presence or absence of diphtheria from the clinical appearances alone and independent of the bacteriological examination, is not only mistaken, but is a dangerous person in the community.

W. P. M.

† † †

An Appeal to Those Who Use Bromine.

Physicians who have occasion to use Bromine in their practice, have no doubt met with much difficulty, and perhaps actual destruction of the tissues, by their unsuccessful attempts to remove the stopper in the original package. These attempts invariably end by the breaking of the bottle, owing to the practice of the manufacturing chemist of firmly sealing the glass stopper in the bottle.

This custom is of course advantageous to the shipper and those who deal in this element; but how about the actual consumer? He pays for the Bromine, also the bottle, takes it to his office or laboratory, and prepares for a siege. Doors and windows are thrown wide open, alcohol lamp or Bunsen's burner lighted, and all superfluous clothing discarded.

Wise is he who now has an accident policy, for after a series of futile attempts to remove the stopper, he finds that it has been intentionally cemented into place for all time, for the convenience

and protection of the agent, at the consumer's expense. Nothing short of breaking the bottle (which, of course, is paid for by the consumer) is of avail, so hammer and tongs or some other appropriate article is procured, and this being the last means of obtaining the coveted article an effort to knock off the neck of the bottle is in order.

A series of gentle taps are applied, with a gradual increase of force, until at last the bottle breaks; not at the desired point, of course. Out flows the bromine, at times on the table, floor or clothing, or possibly on the hands; then comes the abandonment of all business for a few weeks, intense suffering and much experience—the reward for the consumer's intolerance. All for the security of those who are the carriers.

It has recently been demonstrated that the element can be put up in a form which will admit of safe transportation, and yet not be a source of danger to the consumer. And if the latter would unite in rejecting the material when shipped in the manner first described our troubles with bromine would soon be over.

C. E. TENNANT, JR.

† † †

How Shall Physicians Protect Themselves?

There has been much discussion of late amongst our physicians, in local societies and otherwise, as to means of protection against unjust and malicious suits for malpractice, instituted by irresponsible parties, and conducted ordinarily by impecunious attorneys "upon shares," or, to speak a little more politely, "for a contingent fee." The discussion has apparently pretty well established the fact that it is impracticable to attempt the passage through the legislature of an act requiring the plaintiff to give bonds for the payment of costs in event of failure to convict, as such an act would, the attorneys tell us, work great hardship to poor but deserving people in many instances.

A committee of physicians is considering the advisability of introducing a bill, limiting the time during which suit may be brought against a physician to a few months, at most. As it is at present, the suit may be brought years after the alleged damage has been done to the patient, when time has obscured the whole matter so completely that justice cannot be attained. If notes and accounts are controlled by statutes of limitation, such suits certainly should be.

Another committee is investigating the feasibility of organizing a protective association, the object of which shall be to give mutual assistance in event of suits of the nature mentioned. Such associa-

tions have long been operative in Great Britain and, to a certain extent, in this country, and have been of much value to their members, not only in affording help in time of trouble, but by the very fact of their existence in discouraging the bringing of suits not having a real foundation.

It is, perhaps, not as widely known as it should be, that most of the suits brought are initiated chiefly with the idea that the doctor attacked will compromise rather than stand suit, for it is well known that the victory for the doctor means in reality only that he has not suffered quite so severely in the battle as he would have done if defeated. He is damaged in pocket, in feelings and in reputation, in either event. In a recent suit for a large sum, an offer to settle for \$300 was made by the plaintiff's attorney.

A plaintiff knowing that he had no real case would hesitate more in suing a member of an association which would furnish him financial and moral support, than in the case of a physician not so protected.

The best method of all of discouraging unjust suits against the members of our profession lies in the performance by every physician of his plain duty, when asked to appear against another physician in court. Without the support of some medical man, no suit will be brought that has not a proper foundation in wrong doing of some kind by the physician attacked. We should work diligently to bring all physicians into the fold, where they may feel the ennobling influences of association with the best members of our guild, and be led to see the suicidal policy of "going it alone," without in any way helping, or being helped by an organized profession.

J. N. H.

† † †

Indemnity Bond for Plaintiffs in Damage Suits.

In Colorado any worthless vagabond may bring an unjust and vexatious suit against a physician who has attended him, without remuneration of any kind, provided he can find a lawyer who will take his case on a contingent fee, with the hope that the doctor will pay something to save himself from the great expense and annoyance of a prosecution.

The case may be absolutely without merit or shadow of substance of any kind, yet by pleading poverty the plaintiff may have the costs of the trial borne by the county, and the defendant and the county have no redress or hope of reimbursement for the damage done them in the matter, the defendant as a tax payer having to bear his portion of the blackmailing prosecution, of himself brought through a "court of justice."

In such cases the trial judge should exercise his undoubted prerogative and throw the case out of court on a non-suit when the infamous character of the whole proceeding is so evident as it is in nearly all of these cases, thus protecting the county and the tax payers (whom he represents), also protecting the dignity, honor and justice of the court against its prostitution to dishonorable and unworthy ends, and incidentally protecting worthy citizens against unjust, costly and damaging persecution.

That such plaintiffs should be required to give an indemnity bond to afford redress to the defendant in case no good cause of action should be made out, would also be but just and equitable, and it would be of all things the best deterrent for these blackmailing suits, saving expense to the county and unjust loss of reputation to physicians, and the court before which these cases are tried.

That suits of this kind are rarely brought by attorneys of standing and good reputation in the community in which they live, is in itself evidence of their character. They are almost invariably brought by plaintiffs and attorneys who have neither money, reputation, nor anything else of value, to lose. In a recent trial of this kind in Colorado, one of the attorneys for the plaintiff is reported to have said that he did not expect to win the suit, but he should make a reputation out of it. How long will the county and the medical profession stand the sacrifice of time, money and reputation, and the courts the contemptuous attitude in which this sort of thing places them, simply to give notoriety to obscure lawyers who would themselves in after life be ashamed of the act, if they ever attained a standing in their profession which brought them into good professional repute. That these cases seldom succeed these men very well know; they are not brought for the purpose of securing a verdict, but with the hope that they will be settled for a monetary consideration, of which the shyster will get the greater portion, or for the purpose of making a sort of reputation, of which this unknown thinks he will be proud, and from which he hopes to get notoriety which will bring him a business of a better kind. Jesse James and Albert Hense Downen are "Angels of Light," men of honor and courage beside these despicable licensed blackmailers who are a disgrace to a worthy profession. H. G. W.

† † †

"Doctors of Refraction."

This is evidently a new title that has recently sprung into existence. We have travelling in our state certain men who claim to hold this degree. As to how this degree of "Doctor of Refraction" was obtained and by what kind of an institution conferred we know

not. We understand that these gentlemen use the abbreviation "Dr." before their names in signing their letters of correspondence, and use the same abbreviation before their names on their professional cards. To say the least this is misleading and it would seem that it is done with the intention to mislead. These men encourage those with whom they have intercourse to call them "Doctor," and therefore they are commonly known as doctors in the communities through which they travel. It is very possible that few except their intimate friends think they are not doctors of medicine.

To the uninitiated we would explain that these "Doctors of Refraction" are men whom we have heretofore known as "Travelling Opticians," *i. e.*, they sell glasses. They are not authorized by the laws of the state to practice any profession, *nor empowered to collect any fees*. Therefore they are nothing more or less than *opticians*, and can only collect for the *wares* they sell.

It is a well known fact that they have, by introducing themselves as "doctors" to the heads of some of our large schools throughout the state, obtained permission to examine the pupils of said schools, ostensibly with the intention of compiling statistics concerning the proportion of students who have refractory errors; a very laudable purpose we admit, but since these men have no intention of using these statistics and therefore have no use for them, we are inclined to doubt the motives that have actuated such painstaking scientific work. No, their object is to come in contact with the students, and by a cursory examination of their eyes to impress upon about 90% of them that they should wear glasses.

Children are impressionable, and it is not difficult for a man much older in years and experience to convince them that they need glasses. A large proportion of our students study hard, and therefore use their eyes excessively. The eye is an organ much like any other part of our economy, operated upon by muscles, it will become tired if given a great deal of work to do. It is easy to make these students believe that the eye strain is due to a refractive error, and that glasses are needed. Again, many of these subjects are young girls undergoing the changes incident to puberty. They are more liable to symptoms of eye strain at this age than at any other. How easy it is to make a girl at this age think that she should wear glasses! Many of these students wear glasses that have been prescribed by competent oculists at considerable expense to the parents. They are very politely informed, however, that the glasses are incorrect. These various reports are carried by the students to their parents, who, if they are sufficiently gullible, permit their children to be fitted by these "Doctors of Refraction." In

event of the glasses not proving beneficial they are put to an additional expense of going to an oculist to finally determine if there is really anything wrong with the child's eyes, and if glasses are required. We are informed by the oculists of Denver that they have been kept busy for the past year examining such eyes, and prescribing the correct lenses when needed, but that in the majority of cases the eyes were found not to need glasses.

Another point: It is impossible to determine the amount of a refractive error in young people without paralyzing the accommodation. This can be laid down as a positive rule. These men dare not use any drugs in the eye to paralyze the accommodation; the laws of the state so regulate the use of such drugs that none other than graduates in medicine are permitted to use them. These "Doctors of Refraction" evidently are not deemed competent to handle drugs in any form.

The oculist has nothing to complain of from these men, in so far as his business is affected, for the reason that it only tends to increase the amount of his refraction work.

Physicians have for long been the guardians of the public welfare. It is impossible to sit still and see the principals of our schools so humbugged and the parents and students so taken in. It is to be hoped wherever these men present themselves to the presidents and principals of our schools asking permission to examine the eyes of the students of their school, that the said presidents and principals will encounter a strong protest from the physicians of that city. We do not believe in encouraging schemers in their nefarious practices, nor do we believe it is the desire of those in charge of our educational institutions to willingly subject the young people under them to the preying avarice of incompetent men.

G. M. B.

"Mike," said the superintendent, "there is a dead dog reported in the alley between Illinois and Meridian streets. I want you to look after its disposition." An hour later the intelligent officer telephoned: "I have inquired about the dog, and find that he had a very savage disposition."—*Indianapolis Journal*.

With this issue our Journal becomes a seventy-page magazine. This is an increase of eighteen pages per month over what it was a year ago, and an increase of thirty-four pages over *The Colorado Climatologist*, the journal we succeeded. The end is not yet. We intend to make this Journal second to no other Western publication, if the profession of the Great West continue their cordial support.

Book Reviews.

THE PRACTICE OF MEDICINE.—A Text-Book for Practitioners and Students, with Special Reference to Diagnosis and Treatment. By James Tyson, M. D., Professor of Clinical Medicine, University of Pennsylvania. Philadelphia: P. Blakiston & Co. 1896

In reviewing this "Practice of Medicine" by James Tyson, we find that it is not only one of the latest, but one of the most exact and readable text-books on the subject. Containing, as it does, ninety illustrations, including various temperature charts, it makes the book an attractive volume.

The author has aimed to make the work a valuable one in that he quotes extensively from specialized works on special subjects. Although the book is supposed to have been written with special reference to diagnosis and treatment, we find that the other departments with some exceptions, under which the various diseases are discussed, have been quite fully considered. Especial commendation is due the author for the historical points of interest.

Very few authors consider mountain fever as a special disease, but Dr. Tyson, although at variance with some, makes such a heading and speaks of it as a variety of typhoid fever. He does not consider it to be an intermittent, as some do, and will not even allow it to be spoken of as a typho-malarial fever, for says he: "Such a view implies a separate specific disease which is not admitted at the present day by the best authorities."

The most fatal of all the exanthemata, viz: scarlet fever, deserves a more lengthy discussion with reference to treatment. Surely more than one page should have been devoted to the management of such an important subject. If the virtues of the hot bath had been extolled, and the throat treatment decidedly more emphasized than it is in the work, it would surely redound to the abler instruction on the part of the reader, the saving of many a life and happiness to many a home.

It is with pleasure that we note on page III, in the consideration of the prognosis of diphtheria, a citation from a recent paper by Dr. Wm. P. Munn, of Denver. He quotes the statement that since the introduction of the antitoxin treatment the mortality of this disease was reduced by 50% to 60%. In discussing the treatment of diphtheria, the author aims to be very explicit and specific in his instructions for the carrying out of the serum therapy.

The same thoroughness in treatment is made manifest in his strong advocacy of the Brand method of treatment in typhoid fever. The therapeutic discussions throughout the book are reliable, singularly free from fads, up-to-date, and give evidence of the fact that the author is a man of wide clinical experience.

The proper technique for the diagnosis of diseases of the stomach, which is omitted in so many text-books on medicine, is fully spoken of and the author deserves credit for his explicit statements as to the result of both external and internal examination of this organ.

The work on the whole is well arranged and well proportioned. The definitions are peculiarly lucid. They are terse and exact. Redundancy is as a rule avoided.

Typographical errors are but few. The book is undoubtedly one of great merit, and if but brought to the notice of the various professors filling the chair of medicine in the respective medical schools it will meet with their recommendations to their respective classes, and thus at no distant date be looked upon as the standard text-book on the practice of medicine.

H. W. R.

* * *

THE NON-HEREDITY OF INEBRIETY.—Leslie E. Keeley, M.D., LL.D. Scott, Foresman & Co., Chicago. Cloth, 358 pages, \$1.50.

This is a new book by the author of that misnomer, *The Keeley Cure*. It is a readable book and in the hands of the friends of the unfortunate ones under Dr. Keeley's proprietary remedies, may lighten many a heart ache. He pleads for what is already conceded, that inebriety is in a sense a disease and must be treated as such. He does not, in his index, refer to dipsomania, which is hereditary, and so recognized by the highest authorities of to-day.

A number of passages in his book need some explanation.

Here is one, "I regard the chief cause of drunkenness, or the wide universal use of alcohol, to be due to the poisoning caused by the germ of disease and the unsanitary public putrefaction of dead organic matter." This is mere drivel.

As an example of Dr. Keeley's best style, the following is taken: "To-day there are only a few old fossils left who do not accept the germ theory of disease. These gentlemen are too old to learn new things and their brains are not plastic enough to dismiss old creeds. They will die in their doubts and be forgotten."

Dr. Keeley does not give his treatment. He states that he has no formulæ to make public. It is not necessary. Strychnine nitrate was discovered long before Dr. Keeley's time, but was not pre-empted as a business move and made to shine as a new discovery by more modest, but more capable workers in this field.

Dr. Keeley's book is of the pseudo-scientific order. Its issuance is a good business move. All of Dr. Keeley's moves are good business moves. He is first a business man, secondly a scientific gentleman of limited acumen,

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Original Communications.

VOLUNTARY FRACTURE AND DISLOCATION OF THE SECOND CERVICAL VERTEBRA.—REPORT OF A CASE.

By A. STEWART LOBINGIER, A. B., M. D.,
Denver, Colo.

Professor of Surgery in the University of Colorado.

On the night of February 4, 1896, the writer was called in haste to see the subject of this report, who had just met with an injury while performing an athletic feat in the Y. M. C. A. gymnasium. Dr. John Chase, in whose office I happened to be at the time, kindly consented to see the case with me. Dr. H. B. Whitney, the physician to the gymnasium, was at my request immediately sent for. The assistance rendered by these gentlemen in the exhausting efforts at resuscitation was invaluable.

I reached the gymnasium not later than three minutes after the accident happened and found the patient, Owen D., lying flat on his back on a mat, limp and lifeless and absolutely paralyzed, save a feeble action of the heart. I was told he had not breathed, not even gasped, from the moment he fell prone to the mat. A hasty examination was at this time made and revealed total absence of respiratory action, the diaphragm itself being motionless. There was no pulse at the wrist and the patient was rapidly growing cyanotic. The director of the gymnasium and the brother of the patient, who were the most competent witnesses of the accident, gave the following report:

Young D., a machinist by occupation, was 21 years old, weighed 180 pounds, was of temperate life and had always been well. He was one of the most experienced athletes who visited the gymnasium, and a regular attendant at night. He excelled in the athletic feat known as "snapping under" (the horizontal bar), always easily emerging on

the other side of the bar and finishing in a graceful vault. On this particular occasion his faultless performance had attracted more than usual notice. Just before his last act he remarked to his instructor as he reached for the bar, "This will be my best." As he threw his head backward and to the right, in order to pass under, nothing was observed, save a little added vim and energy in the act, until he emerged on the other side of the bar, when, instead of coming up with an elastic spring for the final vault, he rose limply, his head fell on his chest, and his body pitched forward semi-prone, limp and lifeless. No sound was heard as of snapping bones or ligaments as he passed under, and all insisted his head had struck no obstacle as he flung himself beneath the bar.

Examination of the cervical spine revealed no deformity whatever. All the reflexes were abolished and, save the feeble cardiac action, no evidence of life was present. No time was lost, however, in an effort to resuscitate the patient in the hope that he was suffering but a temporary shock, and that the respiration and heart might be speedily restored.

Fearing, however, that there might be a cervical fracture or dislocation, every precaution was taken to adjust the column in the least harmful position. Placing the patient in the decubitus, with the neck slightly supported and gently extended, artificial respiration was immediately begun and maintained for an hour and a quarter. Respiratory and cardiac stimulants were given hypodermically, and repeated at frequent intervals. Electricity was applied and inhalation of oxygen employed for a full hour. But no remedy gave more than the most transient improvement or hope of returning animation. Once or twice there seemed to be less cyanosis, which was ascribed to the effects of the oxygen. But it may be truthfully affirmed that the patient never breathed except as he was artificially forced to, from the moment he fell until the heart ceased to beat an hour and a quarter later.

With much difficulty consent was finally obtained to have a *post mortem* examination, which was held fourteen hours after death. It was the belief of the physicians who had observed the case that there was probably a hæmorrhage into the pons or near the fourth ventricle, inasmuch as the most careful examination of the cervical spine, both ante-mortem and post-mortem, failed to reveal dislocation or deformity. A systematic examination of the entire contents of the cranial cavity, including serial section of the entire substance, together with the critical inspection of the sinuses and meninges failed to disclose any lesions. Surrounding the meninges of the upper portion of the cervical cord, however, there was observed some extravasation and a much

deeper injection of the membranes and wall of the canal than would be expected.

Notwithstanding our failure to discover any cervical dislocation or fracture, some of us did not feel satisfied on this point. When the suspicious signs above described were considered the belief became fixed that at least a hæmorrhage must have occurred in the upper cervical cord and it was determined to remove the cervical spine.

I have removed the cervical spine from many subjects, but never before met so difficult a case as this one. The neck of the subject was fully sixteen inches in circumference and intensely muscular, with an unusually large amount of ligamentous and aponeurotic tissue. When this portion of the column was finally removed the interesting features of the case became immediately apparent. The second cervical vertebra was thrown forward and to the right on its articular bearings a full eighth of an inch. The anterior common ligament was ruptured through its three layers. The lip of both the second and third vertebra was broken off irregularly along the line of junction. On the right side this fracture extended into the inferior articular facet of the second vertebra.

On removing the spinous process of the second vertebra the cord was found soft and degenerated to the extent of a full inch. The greatest change in the cord was at the point opposite the articulation of the second with the third segment of the spine, showing that the pressure of the odontoid process on the cord would not fully account for the softening; nor, indeed, could pressure from the odontoid be assigned as the probable cause of death. The meninges were deeply injected immediately about the area of the softening, but no clot was found pressing on the cord nor within its substance. The extent and intensity of softening found in the cord in this case is unquestionably unusual. It seems still more worthy of remark that it should have been found in this condition within fourteen hours after death, when dissolution must have antedated all degenerative change.

The paralysis of the diaphragm showed the origin of the phrenic nerve to have been included. The totality of the paralysis excluded many of the customary phenomena and especially the phenomenon of priapism observed usually when only partial paralysis results from traumatism to the upper area of the cord.

The remarkable feature of this case, and the point which must give it statistical and historical value, is the fact, of which there can be no question of doubt, that it was produced by a voluntary muscular contraction of the left posterior group of cervical muscles, and simultaneous and coordinate with this, a relaxation of the right anterior group of cervical muscles allowing the head to drop backward and to

the left with sufficient violence to cause the lesion. The belief that the rupture and dislocation were caused by the fall was plainly disproven by the testimony of every witness, for it was clearly stated by all that the patient was limp and, to all appearances, mortally injured before he pitched forward on the mat. Besides, the well defined position of the rupture, being in front and to the right, corresponded precisely with the movement made so violently in emerging from under the bar. It seems clear, also, from a study of the manner in which the subject performed this athletic feat, that the rupture and fracture were produced in emerging from under the bar on the far side, rather than from the initial effort to "duck under," made on the near side.

The literature on the subject of voluntary fracture is extremely limited. Among the large number of cases of traumatic luxation of different portions of the spine reported by British, French, German and American surgeons I have found none which even in a general way was etiologically similar to the one herein detailed.

It is well known that a fall from a considerable height is the common cause of these injuries to the spine. Fracture and dislocation of the cervical spine has also occurred in a man on horseback riding swiftly and unconsciously against the limb of a tree; or again, striking the neck against a taut wire or line stretched across the path. These are all cases of genuine traumatism from a force or resistance exerted from without, and are not to be confused with the clear and unimpeachable history of the case which is here reported. It was observed by the many witnesses of the *post mortem* in this case, that there was a marked disparity between the size of the spine and its muscular covering. As the former seemed preternaturally small and slight for a subject of such massive mould, the latter was equally abnormal in its size and amount. The ligamentous and aponeurotic attachment of the muscles to the spine was equally abundant and strong. This was true likewise of the anterior common ligament and of the other intervertebral ligaments. It may reasonably be concluded that the accident was made possible only by the extraordinary strength of the muscles co-ordinately contracting and relaxing about a lightly constructed column.

Old Mrs. M., who was seriously ill, found herself to be in a trying position, which she defined to a friend thus: "You see my daughter Harriet married one o' these homeypath doctors, and my daughter Kate an allypath. If I call in the homeypath my allypath son-in-law an' his wife will git mad, an' if I call in my allypath son-in-law, then my homeypath son-in-law an' his wife will git mad, an' if go ahead an' git well without neither o' them, then they'll both be mad, so I don't see but I've got to die outright."—*Detroit Free Press*.

A TREATMENT OF PHTHISIS. *

By **ALFRED R. SEEBASS, M. D., PH. G.,**
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In presenting a paper to you, gentlemen, with this title, I cannot but to some extent follow the well trodden pathway of many others, possibly of more ability by reason of wider experience; but having followed up carefully a treatment not universally in use, I beg leave to ask your attention for a short time.

About two and half years ago my attention was called to a then new treatment for phthisis pulmonalis which was practiced by Dr. G. M. Carasso, medical director of the military hospital at Genoa, which was published in the *Centralblatt für Bacteriologie und Parasitenkunde*.

It has been my practice to review constantly the best medical journals in search of a treatment that will help and arrest this dreaded disease, if this be possible, in the first and second stage cases, and even some third stage cases where the cavity is small and in the apices of the lungs. Time will not permit a careful review of the many and varied treatments that have been practiced, but I will hastily mention some of them that have been employed in the last decade.

The gold and iodine by hypodermatic injection, the sulphuretted hydrogen by rectal injection, Koch's tuberculin, its modifications by Dr. Klebs—tuberculoicin and later on antiphthisin. Permanganate of potassium and salicylic acid, the creosotes, guaiacol, oxygen and ozone, Edson's treatment and others not worth while mentioning. All the above mentioned treatments have as an object the destruction of the bacillus, owing either to their antiseptic action or their influence on tuberculous tissue, as do the tuberculin products.

The beechwood creosote, among these mentioned remedies, has undoubtedly given the greatest amount of satisfaction and to its use can be ascribed the largest number of cures. It has but little direct action upon the bacillus but it stimulates cellular activity and decreases the inflammatory process in the tuberculous tissue in the lung; it disinfects the poisonous products of the bacillus and lessens reabsorption, through which the general tone of the body is elevated.

The shortest way, without doubt, to medicate the tuberculous tissue, in the lung, is by direct inhalation of some substance which is readily volatile at ordinary temperature and made still more so when inhaled into the lung, which warms it up, causing it to expand and vol-

* Read before the Alumni Society of the University of Denver, February 6, 1897.

atilize still more readily. Most important among these volatile substances may be mentioned the volatile oils, such as cinnamon, peppermint and cloves. These have powerful antiseptic action, especially so the oil of peppermint, which power Koch has nicely demonstrated. A solution of 1-3,000 will stop the growth of the bacillus of anthrax and its spores, and the vapor of which rapidly destroys both the bacillus of anthrax and of tubercle. Making use of these facts Dr. Leonard Braddon, in the *Lancet*, reported good results by inhalation of oil of peppermint employed in the treatment of tuberculosis. Later on Dr. Carasso used the inhalation of oil of peppermint in connection with the internal use of creosote and at the same time hyperalimentation

It was the doctor's results, published some time ago, with this treatment which led me to use this combined antiseptic treatment with the hyperalimentation. Since that time I have 68 cases on record which I have treated by this method, and am I pleased with the results I have obtained so far. A longer period of time must elapse before I wish to state definitely whether or no a permanent arrest of this disease has been secured. Of these 68 cases, 7 were first stage cases, 39 were second stage cases and 22 were third stage cases. Of the 7 first stage cases, 4 are discharged cured, 3 are lost sight of. Of the 39 second stage cases, 21 have been re-examined in the last three months, with 10 complete arrests of the disease, 15 very much improved, with gain in weight from 5 to 21 pounds, absence of sweats from time of beginning treatment, appetite very much improved, with general good feeling throughout, disease slowly being arrested with physical signs improving; of the remaining 18, 14 have been lost sight of and 4 have gone on to the third stage, 2 rapidly failed within four months and died, 1 died six months after beginning treatment, and the last one a year after. Of the 22 third stage cases, 5 have died, 9 have about held their own, with occasional losing in weight, and 6 seem to be in good condition, 5 of which have gained from 7 to 36 pounds are now following their regular occupations and the physical signs indicate a complete arrest of the disease.

For inhalation I use a combination of Hotchkiss' oil of peppermint and Merck's eucalyptol, since some of the oils of peppermint upon the market have been chilled and the menthol removed, leaving a very weak oil behind.

Dr. Carasso suggested the use of a rather impractical instrument, consisting of a little cushion, to be tied under the nose as a receptacle for the oil of peppermint. Also, two small tubes to fit the anterior nasal cavities, to be worn in the day time. They are hidden from view, but very shortly set up considerable irritation and discomfort.

Most of the inhalers upon the market have the disadvantage

of making inspiration more or less difficult, and by so doing cause the secretions to be drawn further down, rather than to favor their easier expectoration and, also, make easy expiration practically impossible on account of their density necessitating re-breathing some of the exhaled air. I, therefore, devised a very simple little apparatus, consisting of a wire frame to fit over the nose and mouth, and retained there by a rubber band which goes over the ears and around the head, partially covered by a piece of lint, which can be replaced by fresh lint at any time, and is made so as to make inspiration and expiration very easy. If practical, my patient is instructed to wear the inhaler four or five times during the day, an hour at a time. I instruct my patients to drop about fifteen drops on the inhaler at night time, fasten it and retire with it on. Should they awake they are to use fifteen drops more. By doing so they inhale the air of the chamber saturated with the volatilized oils all night. In the morning on arising my patient is again to drop fifteen drops on the inhaler, sit up in bed or on a chair and, with the inhaler in place, is to practice deep breathing for five or ten minutes. This will saturate the inhaled air thoroughly with the oils, the oils will expand by the normal body heat, and go to the peripheral portion of the lung, expanding the bronchioles and air vesicles, at the same time bringing there a powerful antiseptic. This is usually followed by cough, with copious expectoration, which will give the patient some comfort, freedom from cough for several hours, and produce a sense of well feeling in the chest.

Internally I use a combination of Hotohkiss' oil of peppermint with Merck's beechwood creosote in the proportion of three of the latter to one of the former, in increasing doses, which are taken after meals, in capsule, on sugar, with a swallow of milk or rubbed up with ten or fifteen grains of bismuth in a capsule, according to the irritability of the patient's stomach or the fancies of his palate. Here the oil of peppermint overcomes to a great extent the oftentimes nauseating and disagreeable effect upon the gastric mucosa, often allowing a more rapid increase of the creosote. I have several patients now taking forty-five drops of this mixture, three times a day, without the least disagreeable effect. Since hydrocarbons and carbohydrates are in most cases badly borne by the stomach in such cases, I have my patients partake freely of a nitrogenous diet, principally beef and mutton, fresh fish, oysters or game and poultry in season, a large dish of any of the cereals in the morning, from one to three quarts of rich milk daily, taken between meals, and a sour wine of good quality, as the Inglenook Wine Co.'s, Sauterne, Zinfandel, with meals. Should wine be not well borne by the stomach, a glass of ale, either imported or that made in Golden by Coors, taken with meals, will answer well; or

if the patient be restless at night or troubled with insomnia, a glass of it taken before retiring will do nicely to correct this trouble. Other symptoms are treated as they arise. Out of door exercise from three to six hours daily is advised, horseback riding if the general condition of the patient allows, or quiet walking during the sunny hours of the day, with a nap for half to an hour after meals is also advised.

**THE IMPORTANCE OF BLOOD STUDY IN EARLY TUBERCULOSIS,
WITH TECHNIQUE OF PREPARING BLOOD
FILMS FOR STUDY.**

**By A. M. HOLMES, A. M., M. D.,
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A physical condition ascertained from a study of the blood does not, as some may think, depend upon the power of guessing, but rests upon a judgment formed and deductions made exclusively from what is observed through the microscope.

If the blood is properly studied, it will furnish the most accurate and scientific method of arriving at the true condition of the patient that we now possess.

The study of the blood by means of stains is necessarily a post-mortem study. As a post-mortem study of the larger tissues reveal a physiological or a pathological condition; so a similar study of leucocytes reveals a normal or abnormal condition of the cell tissues.

My recent researches in tuberculosis have convinced me that the blood not only reveals the tuberculous condition, but that it will reveal this condition before a lung lesion can be detected, or even before the lungs are involved. When a cavity has commenced to form, and sputum has appeared, bacilli find a congenial culture medium in these tissues, and they are present and can be detected. Disintegrating tissues furnish a fertile soil for these germs. And if the predisposition to disintegration can be detected before the active disintegration begins in the larger tissues, it certainly is the most fruitful period for work, if favorable results are what we wish.

When bacilli are found, there is already active disintegration going on in the lung tissues or the larger tissues of the body. The disease has already advanced and the enemy has a strong hold, well established in the body. The bacilli have already pre-empted the territory. The blood examination is for the purpose of surveying the ter-

ritory in advance of them and, if possible, to take means to prevent the bacilli from entering the body.

Some have asked how the blood elements reveal the condition of the larger tissues. When we consider that the larger tissues of the body were constructed of elements that were at one time a part of the blood, it furnishes the explanation. If young cells become adult cells, and adult cells are tissue formers, then it is quite clear that if young cells are weak, feeble and disintegrating, the older cells will be less able to form durable tissues. If the older cells are also showing marked evidence of disintegrating even before they become differentiated into tissue cells, they will evidently not possess much resisting power after they become a part of the organized tissue of the body. Hence it requires one simply to study these appearances for himself and the truth of these relations will need no further argument. If the building is strong and durable it must be formed of good material. It may have every appearance of permanence and durability, yet if crumbling material is within its walls, it will soon yield to the elements, without and within.

If the disease, or a tendency to it, can be detected before the active disintegration begins in the larger tissues of the body, it certainly will give the patient a better opportunity to check it rather than to delay until the lung tissues begin to disintegrate.

When a lung cavity has already formed, accompanied with abundant purulent sputum, bacilli are always present. A diagnosis is then readily made, and when it is made it affords little hope to the patient. The advantage of an early diagnosis will be readily appreciated. The patient will be able to select a suitable climate, accompanied with proper hygienic precautions, which in many cases would certainly avert the crisis.

Another important field opened for the study of the blood, is in cases with a strong tuberculous history. In such a patient a careful study of the blood would reveal the predisposition, and the knowledge of a strong predisposition should cause the patient to take the proper steps to avert further progress. Precautions taken at this stage of the disease would be of much greater benefit to him than if delayed to a later and more advanced stage of the disease.

I have thus far always prepared my own blood films. This is a very essential part of the technique. Unless this is correctly performed, all subsequent work will not only be useless, but may lead to erroneous conclusions. I have therefore formulated a few rules which, if carefully adhered to, will enable any physician, with a little practice, to prepare the films. With this method it is possible for blood films

to be taken in one part of the country, and sent to any other part of the country for study.

All physicians are not bacteriologists, nor do they wish to become such. Neither do all physicians wish to become hematologists, and much less to devote the years of careful laboratory work which are essential before the eye learns to recognize the delicate changes that take place in the cell tissues in certain pathological conditions. This is an age of specialties. No one physician can and very few ever expect to become expert in every department of medicine. The time is not far distant when hematology will not only hold a more prominent place in medicine, but will receive more attention in our medical schools.

TECHNIQUE OF PREPARING FILMS.

If films are too thick or too thin, or poorly spread, they are useless. I will therefore give a brief description of the manner in which I prepare my films, and the rules to be observed.

I use cover glasses, No. 2, "three-fourths of an inch square. I prepare a number of these (six or eight) by thoroughly cleaning them. They must be *absolutely* clean, polished and dry. Any dirt or moisture on the surface will prevent the blood from spreading and will lead to erroneous results. Sometimes very fine lint fibres remain on the cover glass after polishing them between folds of soft linen or silk. These should be removed, as they prevent the blood from spreading.

When the cover glasses are clean, polished and dry, they are placed on a clean piece of paper, with the edge of each glass slightly projecting over the edge of the paper.

The finger of the patient is then thoroughly cleansed and dried. It is then pricked with a good sized needle (not too fine), which has previously been sterilized.

Very slight pressure is then made to the finger and the first drop of blood is wiped away with a fresh piece of gauze.

One of the cover glasses is then grasped with a small pair of forceps and brought close to the finger tip. With the other hand slight pressure is made on the finger, which produces a fresh drop (very small). The center of the cover glass is then brought into contact with the apex of the drop, and is then immediately placed upon one of the remaining cover glasses. If both cover glasses are clean, polished and dry, the blood immediately begins to spread uniformly in every direction. The blood spreads by capillary attraction, and in no case should pressure be used to cause the blood to spread.

As soon as the blood ceases to spread, or reaches the margin of the cover glass, they are picked up with the forceps, by catching the edge of one of the glasses, which was allowed to project slightly over the

other, and by catching the second glass with finger and thumb. They are then separated by pulling them in parallel planes in opposite directions.

If there is any delay after the blood ceases to spread, the film will separate with difficulty or will start with a jerk. This should not occur, and if it does we may be certain that some of the corpuscles will be injured and the films should be immediately destroyed and another attempt made.

When the cover glasses are separated they are placed upon a clean piece of paper, film surface uppermost and covered with a watch glass to prevent dust from settling upon them.

When a sufficient number of films have thus been prepared and are allowed to dry, they are placed in a small card board box with a thin piece of tissue paper between the glasses. The box is then labelled with the name of the patient, date, and the attending physician. The remainder of the box should be filled with cotton to prevent the cover glasses from moving about. Much of this may at first seem superfluous, but I have found by experience that too much precaution can not be taken. And even now I spoil almost one-half of my films before I get those that are satisfactory.

A fresh drop of blood should be used for each film. After it remains on the finger for a short time exposed to the air coagulation begins and it is rendered useless.

205-6 Jackson Block.

GYNECOLOGY UP TO DATE.

By H. G. WETHERILL, M. D.,
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In a comparatively new branch of the medical sciences, one still in its formative stage, steps will often be taken that must be retraced.

Gynecology as an art and as a science is still in its formative stage, much has been done that had to be reconsidered, reconstructed, or altogether renounced, but each experience of this character has left its modicum of benefit behind it and can not be said to have been altogether without good results.

The process of crystalization is going on, and a foundation of sound general principles is rapidly being built for the useful specialty to rest upon.

The first great period in the history of American gynecology has passed, leaving behind the names and works of such great Americans as McDowell, Simms, Emmet, Bozeman, Hodges, Thomas, Byford, Par-

vin, Goodell, and I must add that of Oliver Wendell Holmes, whose essay on "The Contagiousness of Puerperal Fever," entitles him to a place in this list.

It seems evident that we are now at the end of the second great epoch of gynecological development, and about to enter a new field in which the work of this great specialty will be carried on with new notions as to what it is to accomplish.

The reparative, conservative, plastic work of the first period, and the radical, exsecting, enucleating and eviscerating work of the second, lead up most naturally to the reserved, cautious and conservative spirit which marks the advanced lines of the gynecology of the present, and of the immediate future.

Both of the preceding periods have been abundantly fruitful for the welfare and longevity of our women, and the names of men still young, active and vigorous in the gynecological world will go down to posterity because of their having done noble service in the second, and the third of these developmental periods.

The slurs and derision of the pessimists, in the profession and out of it, have not served to deter the earnest and honest laborers in this field from going on in doing that good which they knew was being accomplished. Washington Atlee bore the contempt of the medical world, submitted to being called a quack and endured the ostracism of his fellows for the good cause of ovariectomy, and lived to see the day when these same men were vying with each other to do him honor, and excel in this very work.

In no branch of medicine has honest, earnest and painstaking effort been followed by better results, or greater good to the human family, notwithstanding the overstepping of the mark sometimes in the zeal for progress.

The gynecologist of to-day and to-morrow is, and will be, more a surgeon, in the broadest meaning of that word, and less an operator.

The mere mechanical knowledge which makes it possible to say that a certain organ is diseased, and the power to remove it without killing the patient, will no longer be a sufficient qualification for a gynecologist. The mechanism of the female pelvic organs is not difficult to understand, and their gross anatomy is simple in the extreme. No high order of *purely mechanical skill* is necessary to make a clean sweep of these organs in the human female, and the operator finds an easy task while the surgeon may find a very difficult one.

The point is just here, the careful gynecologist with the true surgical instinct will in the first place spare no pains to make an exact and discriminating diagnosis, he will then aim to bring about a cure

of the diseased conditions, and at the same time preserve to the patient all the functions and organs compatible with good results.

Conservatism, true conservatism, the conservatism which cures the disease, but preserves to the patient all the functions and parts compatible with complete cure, is the watchword of the new era.

Just as the years of experience teach the old practitioner to abandon his poly-pharmacy, to use few and well selected drugs, and place more confidence in the natural powers of resistance and recuperation of his patients, so in gynecology the better knowledge of to-day leads to a choice of operations less radical and mutilating in character, and the reservation of the wonderfully potent remedies and resources at our command for the time and place when they are truly needed.

Many young medical graduates, I might almost say most of them, have a strong desire to be operators. The material, tangible and visible things with which surgery has to do, attract them no less than the display of power to at one sweep remove disease and, perhaps, rescue the suffering and dying. As the operator is gradually evolved into the surgeon through years of experience, he realizes that as his power to do good to his patients increases, the dramatic and spectacular element of his work diminishes. He learns after a while to say "no" to the alluring siren to whom he owes his reputation as an operator, and is content with the reward of good work wisely done, with a clear conscience; and the proud distinction that he has not lived in vain if he has profited by his own errors. To have done his whole duty, however, he must point out the pitfalls and diverticula to those about him, mark this spot "dangerous" and that road "impassible," so doing all in his power to keep others out of the dangers he has met and learned to avoid.

That any single individual should possess all the qualities necessary to make a good surgeon, in their highest point of development is not to be expected. While one man may excel as an operator, another may be possessed of much better judgment as to the indications for and against operation, and the two are in the nature of things highly necessary to each other and to the welfare of the patient.

Some men will from habits of thought and by their usual processes of reasoning, be influenced in forming an opinion by the objective signs a case may present, while others will give undue prominence to the subjective symptoms in the same case, and doubtless they will reach a totally different result. That a conference between these men will be followed by a nearer approach to the truth than either would come at alone, is probable.

The complementary relationship of different types of men in the same lines of work can be made to bear to advantage upon the

abstruse problems constantly coming up for solution. In place of the disreputable jealousies common among them it would be well for all concerned if the cooperation and support were rendered each other which would make all stronger, and without which even the strongest cannot afford to be. To no man is the golden rule more valuable as a working formula than the physician and surgeon.

NEW MEDICAL LEGISLATION.

The following bill has been prepared by the Legislative Committee of the State Medical Society, consisting of Drs. Hawkins, Carlin, W. H. Davis, McHugh, Campbell, Wilson and Durbin. It has already been introduced into the house and is now in the hands of a legislative committee. It has been approved with a few modifications by the Homeopathic Society, and with some amendments, such as striking out "United States" in Section 4, will probably be our next law for the practice of medicine in this state. It is a conservative, yet advanced medical act, being modified after the laws existing in many eastern states. Physicians, by working up the proper public feeling concerning this matter, can do much good:

An Act to Amend an Act Entitled "An Act to Protect the Public Health and Regulate the Practice of Medicine and Surgery in the State of Colorado," Approved March 14, 1881:

BE IT ENACTED BY THE GENERAL ASSEMBLY OF THE STATE OF COLORADO: That an act entitled "An Act to Protect the Public Health and Regulate the Practice of Medicine and Surgery in the State of Colorado," approved March 14, 1881, be and the same is hereby amended so as to read as follows:

SECTION 1. That a board is hereby established which shall be known under the name and style of the Colorado State Board of Medical Examiners, to be composed of six practicing physicians of known ability and integrity, who are graduates of medical schools of the United States of undoubted respectability, giving each of the three schools of medicine (known as the regular, homeopathic and eclectic schools) a representation as follows, to-wit: Three physicians of the regular, three of the homeopathic and one of the eclectic school or system of medicine.

SECTION 2. The governor of this state shall, as soon as practicable after this act shall have become a law, appoint a State Board of Medical Examiners, as provided in Section 1 of this act. And the members first appointed shall be so designated by the governor that the term of office of three shall expire in two years from the date of appointment, the term of office of three shall expire in four years from

the date of appointment, and the term of three shall expire in six years from the date of appointment; thereafter the governor shall biennially appoint three members, possessing qualifications as specified in Section 1, to serve for the term of six years and he shall also fill all vacancies that may occur, and as soon as practicable; *provided*, that in making biennial appointments or filling vacancies the representation of the medical schools in the board shall not be changed from the original basis, as in Section 1 of this act.

SECTION 3. The Board of Medical Examiners shall, as soon after their appointments as practicable, organize by the election of one of their members as president, one as secretary and treasurer, and adopt such rules as are necessary for their guidance in the performance of the duties assigned them, and also adopt a seal which shall be affixed to all certificates issued by them to practitioners of medicine.

SECTION 4. That every person practicing medicine in any of its departments shall possess the qualifications required by this act. If a graduate in medicine of a reputable medical college of the United States, he shall present the diploma to the State Board of Examiners for verification, or furnish other evidence conclusive of his being a graduate of a legally chartered medical school of the United States in good standing. The State Board of Medical Examiners shall then proceed to a written examination of the candidate, and, if he pass a satisfactory examination in all the branches usually taught in a reputable medical college, the State Board of Medical Examiners shall issue its certificate to that effect, signed by a majority of the members thereof, and such diploma or evidence and certificate shall be conclusive as to the rights of the lawful holder of the same to practice medicine in this state; and if not a graduate of a legally chartered and otherwise reputable medical institution of the United States in good standing, such person is not and shall not be eligible to practice medicine in the state of Colorado, nor to go before the state board for examination.

SECTION 5. The State Board of Medical Examiners, within 90 days after the passage of this act, shall receive through its secretary applications for examinations. The secretary of said Board of Medical Examiners shall have the authority to administer oaths and the said Board of Medical Examiners to take testimony in all matters relating to its duties. It shall issue certificates to all who furnish satisfactory proofs of having received diplomas from some legally chartered medical institution of the United States in good standing, and who shall have successfully passed a thorough and satisfactory examination before said board. It shall prepare a form of certificate to be properly filled out, signed and delivered to such persons as shall have passed a

satisfactory examination. Certificates shall be signed by a majority of the members of the Board of Medical Examiners granting them.

SECTION 6. There shall be paid to the treasurer of the State Board of Medical Examiners a fee of \$20 by each candidate admitted to examination; no further fee shall be charged for the certificate. The fee shall not be returned in case the candidate shall fail to pass a satisfactory examination.

SECTION 7. All examinations shall be made directly by the State Board of Medical Examiners. Examinations shall be in writing and the subjects of examination shall be as follows: Anatomy, physiology, chemistry, pathology, surgery, obstetrics, practice of medicine, materia medica and therapeutics, histology, practical pharmacy and bacteriology.

SECTION 8. Every person holding a certificate from the State Board of Medical Examiners shall have it recorded in the office of the clerk of the county in which he resides, and the record shall be endorsed thereon. Any person removing to another county to practice shall procure an endorsement to that effect on the certificate from the county clerk and shall record the certificate in like manner in the county into which he removes, and the holder of the certificate shall pay to the county clerk a fee of \$1 for making the record.

SECTION 9. The county clerk shall keep in a book provided for the purpose a complete list of the certificates recorded by him, and he shall also record in said book the names of the medical institutions conferring diplomas on the holders of said certificates, and the dates when conferred. This register shall be open to public inspection during business hours.

SECTION 10. The State Board of Medical Examiners may refuse certificates to individuals who have been convicted of conduct of a criminal nature, and they may revoke certificates for like cause.

SECTION 11. Any person shall be regarded as practicing medicine within the meaning of this act who shall profess publicly to be a physician or prescriber for the sick, or shall attach to his name the title "M. D.," or "Surgeon," or "Doctor" in a medical sense. Only courts of record shall have jurisdiction of offenses under this act. This act shall not apply to persons legally licensed, or exempt under the provisions of former acts, or to commissioned officers of the United States in active service, or to a physician or surgeon who is called from another state to treat a particular case and who does not otherwise practice in this state, or to prohibit gratuitous services in emergency cases.

SECTION 12. Any person practicing medicine or surgery in any of their departments in this state without complying with the provisions of this act shall be punished by a fine of not less than \$50 nor

more than \$300, or by imprisonment in the county jail for not less than 10 days nor more than 30 days, or by both such fine and imprisonment for each and every offense; and any person filing or attempting to file as his own the diploma or certificate of another, or who shall give false or forged evidence of any kind, shall be guilty of a felony, and upon conviction shall be subject to such fine and imprisonment as are made and provided by the statutes of this state for the crime of forgery. Only courts of record shall have jurisdiction of offenses under this act.

SECTION 13. All fees received by the treasurer of said Board of Examiners, and all fines collected by any officer of the law under this act shall be paid into the state treasury, and all necessary expenses of the board shall be paid for out of the funds of the state treasury. The secretary shall receive such remuneration for his services as in the judgment of the board shall be deemed sufficient. The members of the board shall receive compensation sufficient to cover their actual expenses while in attendance upon the regular meetings of the board, including their railroad fare.

SECTION 14. The State Board of Medical Examiners shall meet as a board of medical examiners in the city of Denver on the first Tuesday in January, April, July and October of each year, and at such other times and places as may be found necessary for the performance of their duties. All acts and parts of acts conflicting with this act are hereby repealed.

Colorado Medical Library Association.

At the annual meeting of the Colorado Medical Library Association, held in the Public Library January 11, 1897, the following statistical report was presented by the Secretary, Dr. Henry Sewall:

Medical Books.—Property of the Denver Public Library, January 1, 1896, 1,435 volumes; January 1, 1897, 1,559 volumes; increase, 125 volumes. Property of the Colorado Medical Library Association, Jan. 1, 1896, 146 vols.; Jan. 1, 1897, 398 vols.; increase 252 vols.

Bound Medical Journals.—Property of the Colorado Medical Library Association, Jan. 1, 1896, 910 vols.; Jan. 1, 1897, vols.; increase 422 vols.

Proceedings, Transactions, Health Reports, Etc.—Property of the Colorado Medical Library Association, Jan. 1, 1896, (bound) 606 vols.; Jan. 1, 1897, (bound, 671 vols.; unbound, 529 vols.;) 1,200 vols.; increase, 594 vols.

Totals.—January 1, 1896, 3,097 volumes; January 1, 1897, 4,470

volumes; increase, 1,382 volumes. Percentage of increase for the year, 41%.

The Colorado Medical Library Association owns, January 1, 1897, 2,920 volumes. Its increase for the year was 75%.

At this meeting Dr. T. H. Hawkins was chosen President, Dr. Laura L. Liebhardt, Treasurer, and Dr. Henry Sewall, Secretary.

Those present at the meeting were: Drs. J. W. Graham, Eskridge, Sewall, Liebhardt, Grant, Spivak, Holmes, Beggs, Freeman, Mann, Hall and Axtell, Librarian Dana and School Trustee Smith.

The Denver and Arapahoe Medical Society.

This report is original with this JOURNAL, and appears only in this Journal.

The first meeting of the new year was held Tuesday evening, January 12, 1897, at the Brown Palace Hotel. It was the annual meeting and no literary program had been prepared. The minutes of the last meeting were read and approved.

Dr. Lincoln Mussey, of the Ohio Medical College, class of '89, was proposed for membership by Drs. Beggs and Levy.

The report of the Recording Secretary, Dr. S. D. Hopkins, was as follows: Number of meetings held during the year 1896, 18; papers presented, 16; reports of cases, 15; new members taken in during the year, 16; resignations, 3, to-wit, Drs. Wilbur, Muir and Nelson; deaths, 0; average attendance per meeting, 29. It was moved that the report be accepted and filed.

The Treasurer, Dr. E. J. Rothwell, presented this report: Received from all sources during the year, \$246.20; expenditures during the year, \$104.65; balance on hand, \$141.55. Applause followed the reading of this report, as a balance for a bad year like 1896 was a thing to be applauded.

Dr. E. P. Hershey, the Financial Secretary, presented a list of checks and bills for the expenditure of \$104.65 during 1896. The expense was largely confined to printing and stamps. He also presented a list of members who had dues paid to January 1, 1897. Although the Society's membership is 143, only 76 names appeared on the list. He stated that 67 members would be dropped from the rolls on June 1st, if their dues were not paid by that time.

Both the Treasurer's report and the Financial Secretary's report were received and referred to the auditing committee. The Censors had no report and the Executive Committee had no report.

The election of officers was next taken up. Dr. W. A. Jayne was elected President, Dr. E. P. Hershey, Vice-President, Dr. C. D.

Spivak, Secretary, Dr. J. M. Blaine, Financial Secretary, and Dr. E. J. Rothwell, Treasurer. The new Board of Censors is composed of Drs. Whitney, Wetherill, Coover, Herrick and Van Zant.

On motion the chair was instructed to appoint an auditing committee, and the following gentlemen were appointed as such committee: Drs. Grant, Boice and Hall.

President Levy in retiring from the chair expressed his thanks for the favors shown him during the year by the members and officers. He spoke kindly of the work of the Secretary. He hoped that the past year had added some value to the Society, but he felt that there was much room for improvement. Attention was called to the fact that the old members were not present in the numbers that they ought to be, and that the young members were the ones that kept the Society going. He touched upon the value that symposiums had been to the Society, but kindly omitted saying anything about the last one. He asked for greater latitude in the scope of subjects to be considered; thought that the Society ought properly to consider regulations affecting the public health, medical legislation, the conduct of the coroner's office, the physician and malpractice suits. He said, "the times demand that the physicians of this state take an active interest in public matters."

It was moved that a committee of five be appointed by the chair to consider the advisability of inviting the American Medical Association to meet in Denver in 1898. This committee to report back to the Society all objections standing in the way. The following committee was appointed: Drs. J. W. Graham, S. A. Fisk, R. Levy, J. T. Eskridge and L. E. Lemen.

On motion a rising vote of thanks was tendered the retiring officers for their efficient work during the year 1896.

The question of returning to the High School Building as a meeting place was brought up, but the matter was referred to the new Board of Directors.

Those who were present at the meeting were: Drs. Levy, Hopkins, Hershey, Denison, Coover, Black, Whitney, Hall, Birdsall, Macphatter, Thomas, Van Zant, Boice, Munn, Graham, Conroy, Grant, Love, Nichols, Spivak, Burns, Beggs, Blaine, Hassenplug, Wilmarth, Chase, Fisk, Schollenberger, Eskridge, Mager, Richardson, Wetherill, Jayne, J. J. Powers, E. J. Rothwell, Herrick, Miller, Pershing, Holmes, Bane and Axtell.

* * *

On January 26th the second meeting of the month was held and the following physicians were present: Drs. J. W. Graham, McLauthlin, Wetherill, McNaught, Grant, Hershey, Zederbaum, Jayne,

Parkhill, Blaine, Sewall, Whitney, Black, Nichols, Love, Spivak, Burns, Van Zant, Hall, Fisk, C. A. Powers, Munn, J. J. Powers, Edson, Hassenplug, Hopkins, Kinney, Thomas, Freeman, Mann and Axtell.

The name of Dr. Carroll Edson, a graduate of the Harvard medical College, class of 1892 was proposed for membership by Drs. Fisk and Jayne. Dr. Lincoln Mussey, proposed at the last meeting, was elected to membership.

Dr. H. G. Wetherill read his paper on "Surgical Shock in High Altitudes." He spoke of surgical shock being usually of mixed origin, hemorrhage and lowered blood pressure being, however, the chief factors in its production. The loss of blood not being necessarily outside of vessels, but removed from the general circulation by being retained in the large venous channels of the viscera. He thought that oozing of blood here less than at lower altitudes, but that the effect of bleeding is greater and the shock from the hemorrhage more rapid in its onset and more pronounced in its severity.

Going into the domain of physics and physiology he showed that the air pressure per square inch here is only eleven and six-tenths pounds and he dwelt upon its effects upon the circulation and respiration. "Given a case then in which the volume of blood is reduced by hemorrhage, * * * will the gain or loss of more than three pounds of atmospheric pressure to the square inch, or to the outside of the blood vessels, alter the condition? Will the opening of the abdominal cavity in such a case make a difference through the admission of air and the loss of muscular and mechanical support to the vessels of the viscera?"

He cited a number of cases in which marked shock had presented itself after his operations, one case in particular in which the woman was absolutely pulseless, and was seemingly restored to life by the introduction into her abdomen of a larger quantity of hot salt solution. Considering in detail the effect of altitude and atmospheric pressure upon the circulation he drew from the facts the following practical applications:

1. In surgical operations, save for the patient every possible drop of blood, and especially as altitude increases and atmospheric pressure decreases.
2. Anemic and exsanguinated patients are more subject to surgical shock at high altitudes than at the sea level and must be more carefully prepared for operation.
3. "Increasing shock" after injuries or operations usually

mean hemorrhage, which must be attended to before cardiac stimulants or transfusion is employed.

4. Supply fluid to depleted vessels. Have fluid hot. In abdominal cases introduce fluid into abdomen.

5. Diffusible and cardiac stimulants next, with heat to the body surface.

6. Evaporation and heat radiation to be guarded against in all operations in high altitudes.

a. Patient to be operated in a hot room.

b. "Sloppy operations" to be avoided.

"To be forewarned is to be forearmed. With the dangers here considered provided against, the elements of disaster may be eliminated, and we may do surgical work in Denver with better results than ever before, notwithstanding the excellent record of the past, and may safely count upon as great success as can be attained anywhere with the same care and skill."

Dr. Rogers was absent, but having read the paper, sent his discussion, which was read by Dr. Wetherill. He thought surgical shock here was greater than at a lower altitude, but thought that compensation was greater and reaction from operations more rapid. He doubted the importance of the air pressure which Dr. Wetherill gave it. He believed oozing and hemorrhage to be less here than in lower altitudes, but knew that evaporation and heat radiation were greater. He believed in a hot operating room and in getting patients up to the best possible physical state beforehand. In abdominal work frequently leaves water in the abdomen.

Dr. Charles A. Powers laid stress upon bleeding as a cause of shock. Does not have operating room at more than 75° F., but has humidity lessened. Does not allow sterilizers in the same room. Has patient well covered by woolen clothing and applies local heat if necessary. Has field of operation made antiseptic before operation. Stopping in the operating room unnecessary and harmful. He thought that the relative occurrence of shock here and in New York was the same. He reported a case of a man with a shoulder and arm amputation and with a trephining of skull who got well. He thought that the case presented by Dr. Wetherill would have had some shock at a lower altitude.

Dr. L. Freeman thought the paper valuable in that it would cause us to observe shock more closely in the future. He did not believe that shock was always accompanied by hemorrhage. Warren in a case of shock opened the belly, but did not find any congestion. Then such congestion may take place without shock. In fainting there is pallor and paleness without shock. A man may

bleed to death and present no shock. He thought something else necessary, and called attention to its nervous origin. If Dr. Wetherill was right we could easily make our condition that of the sea-shore by operating in a sort of a caisson. He had not seen more shock here than in Cincinnati.

Dr. Parkhill said that in his twelve years of surgical experience here he had not seen more shock here than elsewhere. He always looked carefully to the matter of radiation and evaporation. Has operating room at a temperature of 80° F. Does not expose patient's body, which is clothed in flannel. In brain cases uses hot water bottles. He reported a bad gunshot wound occurring at Leadville without surgical shock. In Dr. Wetherill's case he did not believe shock was present. The patient in poor condition had borne two operations and two anesthetics, and yet in thirty minutes her temperature was normal. He had compiled from the statistics of the County Hospital a record of 233 capital operations, in which but twelve cases died of shock.

Dr. Sewall entered into the physiological question of Dr. Wetherill's case, and thought it was one of functional shock, and not organic shock.

Dr. Hall spoke of the question of burns in which there was no hemorrhage, but great shock. He thought that calling attention to stimulation for shock, when hemorrhage exists was very important. He spoke of bicycle racing here and called attention to the high speed attained, probably because of the lessened amount of air to be displaced.

Dr. Fisk spoke of the fact that this altitude does not seem to affect pulmonary hemorrhages.

Dr. Grant said that shock with hemorrhage could never be arrested until the hemorrhage was stopped, and that in Dr. Wetherill's patient, after the hemorrhage was stopped, the hot water and salt, acting on the solar plexus, restored the lost balance.

Dr. Edson presented some statistics from the Boston City Hospital, where out of 7,978 operations of all sorts there were only 101 deaths from shock.

Dr. Black spoke of hemorrhage from nasal membranes, and called attention to the fact of rhinitis occurring in new arrivals in this altitude.

Dr. Jayne spoke of surgical accident work under his care in altitudes of from 8,500 to 11,000 feet, in which he did not find the shock greater than it is here.

Dr. Robinson, of Aspen, was of the opinion that surgical shock was not any more serious at Aspen than at sea level.

Dr. Wetherill reviewed his reasons for writing the paper. He believed that the paper contained a large element of truth. All present had agreed that hemorrhage is less at this altitude than at sea level, and all agreed that heat radiation and evaporation were greater here and that we must take special precautions to preserve the body heat. While every surgeon present thought that surgical shock was not affected by altitude, yet personal impressions could not be accepted for much, and the matter would have to be settled by statistics. In his paper he had distinctly ruled out nervous shock from consideration. Yet some of the speakers had persisted in bringing it forward. The whole matter of greater shock here depends upon blood pressure, and the tendency to-day among surgeons is to accept hemorrhage as the greatest factor in shock. He quoted from a number of physiologies which bore out his physiological explanation, and he vigorously defended the statement that his case was not one of shock. He presented three letters from Leadville surgeons stating that they saw greater shock there than at sea level.

The auditing committee reported that the accounts of the Financial Secretary for 1896 were correct.

Dr. Freeman reported that the formation of a protective association was decided by his committee to be impracticable. The report was received and the committee discharged.

Dr. J. W. Graham, for the committee appointed to invite the American Medical Association to Denver in 1898, stated that he had already addressed a letter to Dr. Hamilton, of Chicago, concerning the matter, but as yet had received no reply. In the matter of subscriptions, about \$2,000 had already been promised. One subscription of \$500, four of \$250 and seven of \$100 were recorded, and he believed that twelve persons could be found to give \$250 apiece, twenty-five to give \$100 apiece, and fifty to give \$50 apiece. Dr. Fisk reported that he had approached a number of wealthy men outside of the profession who had agreed to contribute something for the entertainment of the visitors. It was moved that the committee of five be increased to seven, and that the President of the Society and some physician outside of Denver be asked to serve.

Dr. Blaine spoke of the medical examiners bill now before the legislature, and asked that three members be appointed to look after the interests of the bill. The matter was referred to the President and Board of Censors, with power to act.

At 11:20 the Society adjourned, having been in session over three hours. This was one of the most interesting meetings for many months.

Members of this Society having papers to read, cases to report or specimens to exhibit will please communicate with the Executive Board, consisting of Drs. Axtell, Jayne and Spivak.

The Denver Clinical and Pathological Society.

The reports of the meetings of this Society appear monthly in this Journal.

A regular meeting of this Society was held January 8, 1897, in the offices of Drs. Coover, Fleming, Leonard Freeman and Levy. In the absence of the President, Dr. Black, First Vice President, filled the chair. The minutes of the meeting held December 11, 1896, were read and approved.

Drs. Malaby, Shippey and Ryan, and Mr. Morse, of New York City, were guests of the evening and on motion were invited to participate in the proceedings of the meeting.

Dr. Mager reported, with exhibition of specimen, a case of aneurism of the ascending aorta, with rupture into the pericardium. Twenty ounces of blood surrounded the heart. He also reported, with exhibition of specimens, a tumor removed from the os uteri. It was decided to be a blood mole. Discussion by Drs. Freeman, Hall, Levy, Black and Mager.

Dr. Powers reported a case of operation for strangulated right oblique inguinal hernia in a seven months baby, the hernia having been down, but six hours at time of operation, Taxis had failed. The case was complicated with measles. Prompt recovery. Dr. Powers also exhibited two microscopic slides, with a report of the cases. The first was a tuberculous ulcer of the tongue which clinically exhibited all the symptoms of epithelioma. The second slide was from a fibroma of the breast, simulating carcinoma. Discussion by Drs. Levy, Freeman, Lobingier and Powers.

Dr. R. B. Freeman showed a contrivance to aid in the irrigation of the urethra for cases of gonorrhœa.

Dr. Whitney reported a case of pneumo-thorax in a man seventy-four years old, in which a canula was introduced into the chest wall and left there for three or four days. The man made a good recovery, with one short relapse.

Dr. Axtell reported a case of a baby sixteen days old with measles.

Dr. Waxham reported a case of a man who two months ago inhaled a double pointed tack. The patient refused operation. Discussion by Drs. Mager, Hopkins and Waxham.

Dr. Hopkins reported a case of multiple neuritis of motor form undoubtedly caused by ptomain poisoning. Recovery followed the

attention and treatment directed to the alimentary canal. Discussion by Drs. McNaught and Hopkins.

Dr. Craig reported several interesting operations. One for a large multiple fibroma, one for a large myoma of fifteen pounds, a case of double ruptured pyosalpinx, the woman being decidedly septic at time of operation, and two cases of ruptured tubal pregnancies. All of the cases made prompt and good recoveries.

Dr. McNaught reported a case of a child who died suddenly after inhaling the fumes of sulphur caused by throwing some sulphur on a hot stove for disinfecting purposes. A post mortem examination of the larynx and large bronchi showed nothing. Case diagnosed as laryngismus stridulus. Dr. McNaught also reported a case in which the Parkhill clamp for ununited fracture was for the first time reported to have failed. The patient later acknowledged to have, himself, refractured the bone in a friendly scuffle. Discussion of his cases was participated in by Drs. Axtell, Whitney, Waxham, Hall, Higgins, Hershey, Black, Edson and McNaught.

Dr. Hall reported that he had had in his practice in Colorado thirteen cases of phthisis which had originated in this state. He cited the case of a family in which, after the mother had died of consumption, three daughters died in succession from phthisis. One of the daughters married and infected her husband. All of the other children who came to maturity after the mother died are living and well.

Dr. Black reported a case of a boy who was sent to him the morning following a severe nasal hemorrhage. The nose was examined, but no bleeding point could be detected. Examination of the chest revealed a badly diseased heart, probably mitral stenosis.

After a lunch the Society adjourned to its next regular meeting. The following gentlemen were present: Drs. Axtell, Black, Blaine, Bourquin, Bucknum, Coover, Craig, Fish, Fleming, Leonard Freeman, R. B. Freeman, Hall, Hershey, Higgins, Hopkins, Howard, LeMond, Levy, Lobingier, Macphatter, Mager, McNaught, Mann, Perkins, Powers, Walker, Waxham, Wetherill, Whitney, Edson and Bergtold.

LEWIS M. WALKER, *Secretary.*

The Practitioners' Club.

This report appears only in this Journal.

The regular meeting of the Practitioners' Club was held January 5, 1897, at the office of Dr. Van Zant. Members present: Drs. Case, Powers, Field, Macomber, Taussig, Thomas, Bradner, McNaught, Johnson and Van Zant. The paper of the evening was on

"Puerperal Sepsis," by Dr. J. N. Thomas. The essayist referred to the causes, to the preventive measures (aseptic technique) required and to the proper treatment, if the disease develops. Irrigation, curettage and subsequent packing with iodoform gauze were advocated. The discussion was participated in by all present, and revealed some difference of views as to the desirability of packing. The different types of the affection and the utter helplessness of the physician, with any or all measures in cases, were brought out during the discussion.

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The second meeting for January of the Practitioners' Club, was held on the 19th at the office of Dr. J. N. Thomas. Present: Drs. Thomas, Case, Macomber, Johnson, Rover, Bradner and Van Zant.

Dr. C. D. Van Zant presented the "Phonendoscope" to the Club, explaining its origin and construction. The instrument is, barring the hypodermic syringe, one of the greatest advances in medical mechanics of recent times. It is a great improvement on the stethoscope, as any one can speedily demonstrate to his satisfaction; for sounds entirely inaudible with the latter are quite distinct with the new instrument. This great magnifying of sound enables the physician to use the phonendoscope without disrobing a patient, a decided advantage at times. The instrument comes as a special boon to those physicians whose hearing is somewhat defective. The instrument has two uses, to replace the stethoscope in ordinary auscultation, when it is used without the second membrane and staff; and secondly, with the latter parts attached, instead of percussion. In the latter case no percussion is made, but the sounds which reveal the size, shape, etc., of the underlying organs, are elicited by a stroking of the surface over the part. Differences in intensity and quality, as brought out by this stroking, show the character of the conducting medium or organ beneath. Other points with reference to the instrument and its use were given, after which a general discussion on its merits took place.

Dr. G. W. Macomber reported a case of biliary colic followed by what seemed to be a rapidly developing abscess about the impacted stone. As there was an old malarial history Dr. A. M. Holmes was asked to make a blood examination to determine the presence or absence of the plasmodium malarix. It was found to be absent, but other evidences (leucocytosis) indicated a suppurative process at work. About the sixth day after the colic, a considerable amount of pus was discharged per rectum and rapid recovery occurred. Case was discussed in its several aspects by the members present.

C. B. VAN ZANT, *Secretary*.

Denver Medical College Alumni Society.

This report appears exclusively in this Journal each month.

The regular monthly meeting of this Society was held January 9, 1897, at the offices of Dr. L. T. Durbin, Mendota Block, with President Sheets in the chair. The meeting was called to order at 8:30 p. m., and the minutes of the last meeting were read and approved.

Dr. L. T. Durbin moved that a committee of three be appointed to confer, and report as to the best way of entertaining the next graduating class. The motion was carried, and the chair appointed Drs. Carlin, Durbin and Thompson.

Dr. Fish then read the paper of the evening, entitled "Ununited Fracture," which was discussed by Drs. Durbin, Perkins and Gibson. Dr. Pedersen then reported a case of atresia of the vagina, with hematocolpos, with operation.

Professor Carlisle then entertained the Society by a legerdemain exhibition, which was greatly enjoyed by all present, after which Dr. Durbin served a good lunch.

Members present: Drs. P. V. Carlin, Durbin, Sheets, Gibson, Clough, Johnson, Thompson, Huffman, Pedersen, Neva, Delehanty, Stiver, Bell and Seebass.

ALFRED R. SEEBASS, *Secretary.*

Woman's Clinical Society.

The report of this Society's meetings appear in this Journal only.

A regular meeting of the Denver Clinical Society was held January 9, 1897. Drs. Byington and Ford were present as visitors.

After the reading and approval of the minutes the Secretary read a letter of thanks from the editor of the *Journal of the American Medical Association* for sending the certified list of members as requested.

Dr. Bedortha, although wrestling with la grippe, bravely presented the medical subject for discussion: "Nocturnal Enuresis." She cited a case of a patient about four and a half years of age, anemic and nervous, in which she had used atropia without benefit, and had put the patient upon a course of treatment consisting of one-twentieth nuc. vom., and one-hundredth phosphate of zinc, three times daily, with the idea of toning up the general nervous system. This was followed by a partial amelioration of symptoms.

In the discussion which followed, Dr. Byington agreed with Dr.

Bedortha in the line of treatment, and reported good results in similar cases with calcium phosphoricum.

Dr. Peavy spoke of the use of strychnine sulphate combined with hydropathic measures to the spine.

Dr. Gale advocated the application of argenti nitras, grs. 10 $\frac{3}{4}$, to the urethra in cases where every thing else failed.

Dr. Lawney reported good results with the postural treatment combined with saline laxatives and restricted fluid.

Dr. Bedortha, in closing, said it was possible that the enuresis might be due to lack of balance between the nerve centers or some explosive action of the same.

The meeting adjourned at 9:20 p. m.

M. JEAN GALE, *Secretary*.

News Items.

Dr. Weiss, of Del Norte, was in Denver for a short time early this month.

La Junta was professionally represented in Denver by Dr. B. F. Haskins early this month.

Dr. Allen, of Greeley, Colo., is at present installed at Eaton, attending to Dr. Stover's practice.

Dr. Bond Stowe, of Glenwood Springs, graced Denver with his presence in January, on his return from an eastern trip.

Dr. Sol Kahn, of Leadville, was married to Miss Lillie Rose, of this city, on Sunday, February 7th. Our best wishes are extended.

Dr. A. E. Bonesteel, of Central City, contemplates going to London, England, to study rectal diseases under the master, Dr. Allingham.

Dr. W. B. Fenn, of Colorado Springs, has been elected Secretary of the El Paso County Medical Society. He was in Denver a short time ago.

Dr. E. F. Marscheider, after a year's residence in Denver, finds his health sufficiently recovered to return home, and early this month, went back to New York.

Dr. L. T. Durbin has gone to New York City to take several months of post-graduate work in surgery. His Tramway work will be cared for by Dr. A. R. Seebass in his absence.

Dr. Norman W. Bellrose, of Eaton, Colo., sends us a reprint on "Puerperal Eclampsia, With Report of a Case and Treatment." Dr. Parkhill, of this city, also hands us a number of reprints.

Health Commissioner Munn, of Denver, has appointed Drs. F. E. Waxham and H. W. McLauthlin as consulting physicians to the Steele Memorial Hospital for 1897, to serve without pay.

Drs. Eskridge, Freeman and Pershing, of this city, have delivered lectures on the study of the brain before the students of Colorado College, at Colorado Springs, during the past half session.

From the *American Medico-Surgical Bulletin* we clip the following item: "The Leadville *Democrat* says that DeBeque, Colo., is crying for a physician." This is truly a case of going from home to learn the news.

Dr. G. W. Fraker, of insurance and drowning fame, left Excelsior Springs, Mo., December 16, 1896, for Colorado Springs, Colo., where he will reside. His intention is to establish a sanitarium there for consumptives.—*N. A. Medical Review*.

Dr. Edward Squibb, the eminent pharmacist of Brooklyn, has recently been compelled to suffer amputation of one hand due to continued suppuration about his wrist joint, caused by a fire and ether explosion in his laboratory many years ago.

One of the most successful physicians in this entire mining district is Dr. J. T. Davidson, who bears the distinction of having been the first editor of *The Rocky Mountain Druggist*. He is a pharmacist of the highest skill and easily attains equal eminence in the field of medicine.—*Victor, Colo., Correspondent in Rocky Mountain Druggist*.

The Chicago Board of Health has had presented to it, by the Columbian ambulance association, a mahogany, rubber-tired ambulance, provided with basket stretcher, for conveying contagious diseases to the hospital.—*Medical Fortnightly*. By all means take contagious diseases to the hospital, but is an ambulance really necessary?

Dr. J. S. Brown, who came to Denver on the same pilgrimage that has brought so many unfortunates to our Mecca, succumbed to the ravages of his disease (consumption) at the Gilsey House, in this city; on the morning of February 1st. He practiced in Denver for over four years, and came here from Dayton, Ohio, to which place his body was shipped for burial.

The druggists are waging war against the bill pending in the legislature to tax druggists for a \$300 license fee for all liquors dispensed in quantities of less than ten gallons. Their point of vantage ground lies in the claim that the law would be unconstitutional inasmuch as the licensing of the sale of liquors rested with municipal authority and not that of the state.

It is with great pleasure that we announce a series of letters from our friends, Drs. Stover and Beavis. Dr. Stover is now in New

York City, and is going to write us medical letters from that city that will be breezy and excellent reading. Dr. Beavis is going to Mexico City, to try that country for fame and fortune and he has promised to tell THE JOURNAL all about it. We know that you will enjoy these letters.

The first annual meeting of the natural history department of the State Historical Society was held in this city the first of this month and our worthy city bacteriologist, Dr. H. C. Crouch, presented an excellent paper on "The Black Plague of Bombay," which dealt with the symptoms of this disease, its ravages and the scientific researches that have been given to it of late. He thought that an antitoxin would in time be discovered which would be sufficient to combat the disease.

Dr. J. T. Eskridge, President of the staff of the State Insane Asylum, accompanied Governor Adams to Pueblo on a recent tour of inspection of the Asylum some two weeks ago. They both came away satisfied that the best work is being done that is possible with such cramped funds to depend upon. Dr. Thombs is now serving his eighteenth year as superintendent, and Governor Adams is not likely to disturb him for another six years. This speaks for itself as to the efficiency of Dr. Thombs' management of the institution.

We have received a card of admission to a lecture course given under the auspices of the City Improvement Society of Denver. The lectures are to be given at the Central Christian Church on the Tuesday evenings of February. The following are the lecturers and subjects: Lt. Col. A. A. Woodhull, U. S. A., "The Disposal of Sewage;" Mr. Irving Hale, "Influence of Electricity on City Life;" Dr. W. P. Munn, "The Making of a Healthy City;" Dr. Henry Sewall, "Healthy Homes and Village Improvement Societies."

At the annual meeting of the staff of the Arapahoe County Hospital on the 27th of January, Dr. Clayton Parkhill was chosen President, and Dr. F. H. McNaught, Secretary. Matters of interest in connection with the County Hospital were discussed, *i. e.*, the question of a card catalogue for record of patients; apparatus and help for giving the Brand system of baths; question of diet and medicine. The Secretary was instructed to convey to Dr. Eskridge the good will of the staff, its appreciation of his years of faithful and enthusiastic service, and its regret at his loss from the staff. The county commissioners were present and were urged to build the contemplated hospital wing, and to provide an amphitheatre, to which we could take our American Medical Association visitors in 1898.

THE COLORADO MEDICAL JOURNAL.

SUCCESSOR TO
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A Monthly Journal for the Medical Practitioners of Colorado and Adjoining States.

EDWIN R. AXTELL, M. D., EDITOR.

E. A. SHEETS, M. D., MANAGER.

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VOL. III.

DENVER, COLO., FEBRUARY, 1897.

No. 2

Editorial.

County Medical Society's Cemetery Ground.

Dr. E. C. Rivers informs us that twelve or fourteen years ago the old Denver Medical Society, which at that time met at the St. James Hotel, bought a lot in Riverside cemetery and buried a physician there who came to Denver and died in financial distress. The lot was in the name of Dr. J. C. Davis, as trustee.

† † †

The Oriental Plague.

From newspaper reports we receive the information that there is now raging in Bombay, India, a severe and fatal epidemic of the so-called "bubonic plague," or a plague characterized by a malignant polyadenitis. In the *British Medical Journal* for January 9, 1897, Dr. Cantlie defines the affection as an acute febrile disease of an intensely fatal nature, characterized by inflammation of the lymphatic glands, marked cerebral and vascular disturbances, and the presence of a specific bacillus. Dr. Cantlie states that the disease is a slow spreading one and that it can be readily stamped out in countries having any system of isolation and disinfection.

† † †

Physicians' Mutual Aid Society.

The committees appointed by the various local medical societies to consider the question of a protective association have reported that it did not seem to be desirable and have asked to be discharged. This

in our judgment was a wise course to pursue. Such associations may be of value, but they are apt to influence a jury unfavorably, and usually do more harm than good. The agitation, however, has resulted in some good. We understand that there is being organized a mutual aid and insurance society, which has for its purpose mutual aid and help. Very frequently the profession here is called upon to help in a financial way some of its members. This association aims to do this work for the profession. A death benefit will be made a feature of the association. It is certainly a commendable enterprise.

† † †

The Denver and Arapahoe Medical Society.

(Report of the Recording Secretaries for the years 1895 and 1896):

1895—Number of regular meetings held, 16; special meetings, 2; papers read, 25; cases reported, 17; attendance, 505; average attendance, 28 1-18; members proposed, 26; members elected, 22; members resigned, 1.

1896—Number of regular meetings, 16; special meetings, 2; papers read, 16; cases reported, 15; attendance, 538; average attendance, 28 8-9; members proposed, 16; members elected, 16; members resigned, 3.

The above comparative report as taken from the minutes of our local Society is not flattering to the Society's record for the past year. With an increase of attendance the amount of work presented has decreased and the number of applicants for admission has fallen off almost 50%. We trust that the present officers will exert a strong effort to make a better showing for the coming year.

† † †

Antiseptic Street Sprinkling.

There are daily promenading the streets of Denver hundreds and hundreds of tuberculous patients who, upon coughing, expectorate into the streets, sputa containing the bacillus of tubercle. If it were not for our constant sunshine these germs would be so numerous that our healthy population would have no show against the constant invasion of these germs. There is, however, with our high buildings much shade and portions of the street can never be reached by sunshine for any length of time. A consumptive expectorates into the street a mass of tubercle germs. It is soon dried, mixed with dust and in a short time scattered about by a gust of wind. It is inhaled by susceptible people and tuberculosis soon shows itself. The experience of every physician in Denver shows that tuberculosis among our native population in the cities of Colorado is on the increase, and that its spread is so rapid and marked that it behooves us to consider every practical means to stop its advance.

THE JOURNAL suggests to the Health Department of this city that

corrosive sublimate be added to the water in the sprinkling carts of the city in sufficient quantities to be effective in destroying these germs. It is a simple matter to make such a solution. Nothing but good can result from such a procedure. If the solution should kill a few stray dogs it would add to its value. If it be decided that corrosive sublimate could not be used in the metallic tanks, let formaldehyde be used.

The procedure would make our street dust less harmful than it is to-day, and it would decidedly help to lessen the local spread of tuberculosis which is now attracting attention. We hope to hear from our Health Commissioner on this matter.

† † †

The Old School and Homeopathy.

That there is rapidly dying out the old spirit of antagonism between these two schools of medicine cannot be disputed. No longer do we have long argumentative treatises put into our hands proving the value of the one or the other school. In the race for existence both of us have learned that the people want cures, and they don't care through what school they get them. This competition has been the knock out blow to the sharp fast line once so strongly drawn. Now we find daily consultations between homeopathic and regular physicians, not necessarily for treatment's sake, but for the sake of a diagnosis. Now we have the materia medica and therapeutics of the homeopathic school taught in regular medical colleges, and now we have our therapeutics taught in the homeopathic schools. It is well that the old fight is dying. Both sides have learned many things, and progress has been made through it all. Good men and fine gentlemen can be found on both sides, and none of us are better for calling names. We believe that the old school is a little inclined to make more advances than the new, but this is probably because the adherents of homeopathy have in the past received such harsh words from our side of the contest. Let the line fade until there is no longer any. Both schools have so many common enemies that they cannot afford to longer quarrel.

Recently in Cincinnati one of the State Medical Examiners, a homeopathic physician of liberal views, was entertained and dined by a party of old school physicians and they all had a pleasant time.

Here in Denver a most liberal spirit exists between these two schools. The state board with its representatives of both factions is now acting harmoniously for the good of all.

The day must come when the title "Doctor" is sufficient.

Shall Denver Entertain the American Medical Association in 1898?

In 1894 this great national Association met in San Francisco. The places of meeting for 1895, 1896 and 1897 all lie east of the Mississippi River. We must decide shortly whether we shall extend an invitation to meet in Denver in 1898, for the question must be decided next June at the Philadelphia semi-centennial.

Weighty arguments *pro* and *con* are not wanting. On the one hand we have the excuse that times are very dull, and that the entertainment of such a great association would be a very serious tax upon the medical men of our city and state. We confess to having been of this opinion at the outset. The question certainly demands very serious consideration, for we do not want the members of the Association here unless they are to depart with the conviction that Denver has done her part handsomely. It is needless to say that this means the raising of plenty of the sinews of war.

But there is another side to the story. In times of depression we are all likely to be over cautious, as in boom times we are all apt to be carried along with the wave and to conduct ourselves with insufficient caution, as so many of us realize to our sorrow. But in dull times, more than in any other, is clear headed, intelligent and, above all, "nervy" enterprise required. If the Association is invited here it is proposed to endeavor to have other societies meet here with it, and to make such a display of the advantages of this state, especially from a climatological standpoint, as shall convince the veriest doubter that we possess, as we have so long claimed, a climate superior to any other for the treatment of incipient phthisis.

Much as our purse dreads the abdominal section it will have to undergo in the event of our entertaining the Association at that time, our reason convinces that our expenditure will all be returned to us with interest, and that in a very few years. It is proposed to ask non-medical persons and organizations to assist us in the gigantic undertaking, and assurances of help have already been given us. This request is a just one, for all lines of business will profit by the enormous advertising which cannot but result from the showing of our climatic and other resources to thousands of intelligent physicians.

If, then, a careful preliminary investigation assures us that a fund sufficient for the proper entertainment of the visitors can be raised, and that physicians will enter heartily into the undertaking, we feel certain that it will be best for us and for Colorado to extend a cordial invitation to the Association. If we do not secure the 1898 meeting, it is likely that we shall have to wait several years before another opportunity offers for bringing the Association so far west. But let us all understand distinctly the magnitude of our task, that we may not

undertake it without a full realization of the obligations involved. The coming of the Association means not only a liberal subscription to the general entertainment fund, but the private entertainment of the many friends we shall all find at the meeting. We hope that a careful weighing of the advantages to be derived from such a meeting will convince all readers of the wisdom of extending the invitation, although we confess that we should personally have been more easily convinced if the looked for McKinley prosperity had materialized.

J. N. H.

† † †

Ninth Biennial Report of the Colorado State Insane Asylum.

The last report of the commissioners of the asylum made to the governor shows that there were November 1, 1896, 422 patients in the asylum, 284 male and 138 female. We learn from the president of the board of commissioners that the reports from the different county judges in the state showed on November 1, 1896, that there were 50 women adjudged insane, but unable to gain admission to the asylum.

That this asylum is economically run is manifest from the superintendent's report, which gives as daily per capita cost a little over 36 cents, while the reports of most other institutions show an expense far above this, and in some the expense is twice as great. The president of the board says that on looking over 50 reports, by as many of the principal insane asylums of the country, that in none was the daily per capita cost as small as shown by the report of the Colorado Insane Asylum. The cost in some asylums is 79 cents per capita each day. It is evident that too great economy is employed in the management of our asylum. The lack of sufficient appropriation to furnish the requisite amount of attention, has made rigid economy necessary.

The superintendent is a physician, but he has no resident physicians to aid him in his attention, upon the insane. There are only 11 attendants for 422 patients, and these are all employed during the day, leaving the patients during the entire night without any attention except what the night watchman may deign to give them. If any are sick with pneumonia, fever, or various other diseases, they have to suffer, because the state has not furnished money to employ more attendants. We are glad to learn that the commissioners, during the last two years, have appointed a medical staff consisting of men qualified in the different specialties, and have established a course of lectures for the present attendants, who will be required to pass examinations, from time to time, on the various subjects taught them. Those attendants who fail to pass a creditable examination in January, 1898, will be dismissed. All new attendants employed to care for the insane from January, 1897, will be required to present diplomas of graduation

from some recognized training school for nurses; except in special cases of male attendants, who, on the presentations of certificates of the proper qualifications and experience, may on unanimous vote of the board of commissioners and superintendent be accepted on trial without a diploma. If such male attendants should prove efficient, they may then be regularly employed to care for the insane.

We notice that the wants of the asylum are for attendants, a new cottage for females, provision for resident physicians, ventilation of the male building, the erection of a small hospital to accommodate 10 or 15 patients, insurance and money sufficient to pay off the deficit.

It does seem strange that a modern hospital for the insane, containing 422 patients, should have only 11 attendants. This gives during the day only one attendant to a large ward containing 40 or 50 patients, leaving no one to go out and look after those patients who are fit to be out of doors. If there were more attendants, many who are now confined in the asylum all day might remain in the open air when the weather would permit. Besides it does seem a shame that Colorado should allow her sick to be entirely without attention during the entire night.

If the number of female insane continues during the next year to increase in the same ratio as it has done in the last two years, there will be at least 100 insane women by November, 1898, who will be unable to be cared for by the state, unless proper accommodation is made for the erection and furnishing of a cottage for the care and treatment of those unfortunate ones.

No one man, no matter how great his skill as a physician, can give personal attention to 422 patients each day. The asylum needs resident physicians. It needs at least one female resident physician, and two male. If provision were made to have resident physicians in the asylum, with the co-operation of the superintendent and an intelligent corps of attendants of not less than 15 or 20, records of the patients could be kept; careful and repeated examinations could be made and they might receive as good attention as they do in the best regulated asylums in the eastern portion of the country. There is no criticism against the present superintendent. His position is hard. He cannot change the workings of the asylum, nor give more attention to the inmates, nor give them proper airing, and the many other things that from their infirmities they need, unless the state should make an appropriation that will enable the commissioners to provide the means for the wants of the insane.

The state has invested in buildings on the asylum grounds, about \$250,000, but not one cent of insurance has been carried on these

buildings during the last two years, and if they should be lost by fire there would be a total loss to the state.

It behooves everyone interested in the insane to impress upon the legislators the necessity of making ample provision for the care and treatment of the insane. For this purpose large appropriations are needed and should be given, although some of the institutions whose needs are less urgent do not get what they ask. The commissioners have been too modest to ask an appropriation for five additional attendants, the erection of a hospital and ventilating apparatus, but we feel that these improvements should be made, if the expense can be met without too great a strain upon the finances of the state.

Book Reviews.

DISEASES OF THE STOMACH.—A Text-Book for Practitioners and Students. By Max Einhorn, M.D. New York: William Wood & Co. 1896.

While in Germany during the last two years there have appeared text-books on diagnosis and treatment of diseases of the stomach, from the pens of such eminent writers as Boas, Ewald, Pick, Wegele, Fleiner, Sohlern, Riegel, Rosenheim, Leo, Albrecht, Fleisher and Penzoldt, the English speaking physicians had to content themselves with their Brinton, Fox, Chambers and Habershon, works of undoubted value, but a little out of date. The only modern book that the modern physician could refer to was Mange's translation of Ewald's classical work. The time, however, was ripe for the production of an original work, both in this country and in England. The study of the diseases of the stomach has of late been so extensive, and the contributions made by eminent men in both countries were of such wide scope, that it was natural that those who are interested in this particular branch of medicine should expect to see one of their own midst write a book, and thus represent the sum of learning and achievement made in the field of gastrology. Within a very short time two books have appeared. The first was by Sidney Martin, of England, and the second by our own Dr. Max Einhorn. The demand has created the supply. Those who were itching to write a book may, for the present at least, apply an anti-pruritic, and wait for another opportunity. Einhorn on the Stomach, means the right man in the right place. There is none in this country who has contributed more to the science, and, especially to the art of gastrology, than Dr. Einhorn, and the specialist, the practitioner and the student will alike hail with delight the advent of the first original, strictly American book on diseases of the stomach. Although the author was modest enough in not over-estimating the value of his contributions and has given full justice to other authorities, still every chapter shows

traces of his inventive genius and analytical mind. The book is not of the crazy-quilt order, so common now-a-days. The author has contributed original ideas to every section of the book. To methods of examination he has contributed no less than three instruments—the Bucket, the Gastrodiaphane, the Gastrograph. In methods of treatment, we have Einhorn's Gastric Spray apparatus and the Deglutible Stomach Electrode. All these inventions have gained for themselves universal citizenship, and for their inventor universal fame. It would take up much space to enumerate all his contributions to research and investigation.

The book is divided into fourteen chapters: Anatomy and Physiology (ch. 1); Methods of Examination (ch. 2); Diet (ch. 3); Local Treatment (ch. 4); Organic Diseases, with constant lesion, (chs. 5, 6, 7 and 8); Functional Diseases, with variable lesions, (ch. 9, 10 and 11); Abnormal Conditions, with reference to the size, shape and position of the Stomach (ch. 12); Nervous Affections of the Stomach (ch. 13); and the Condition of the Stomach in diseases of other organs (ch. 14). The style of the author is clear, plain and precise. Hollow verbiage is studiously avoided. Many of the diseases are illustrated by suitably selected cases from the author's private and hospital practice. We find but very few points in which we differ from the author, and very little which we miss. We think, for instance, that the author has underestimated the value of the method of inflating the stomach with carbonic acid gas, a method which we consider in many ways more advantageous to insufflation with air, at least in private practice, if it be only for the reason that it can be carried out without an assistant, as it is impossible to insufflate the stomach with air and at the same time percuss the organ. The book being intended as a text book for *students*, it seems to us the author has not laid enough stress upon the importance, and has failed at all to point out the significance of the subjective symptoms, which in the diseases of the stomach, more than in any other throw so much light, and furnish such valuable data for arriving at the right diagnosis. We regret to miss from the chapter on local treatment, the valuable adjuncts to our scanty therapy, namely, orthopædic treatment, and especially massage, although both are mentioned incidentally as suitable therapeutic agents, in other parts of the book, whereas massage is surely next to lavage in importance, and is recognized as such by Boas, Riegel and Penzoldt.

The typography and the make-up of the book is excellent.

C. D. SPIVAK.

THE COLORADO MEDICAL JOURNAL.

A Scientific Medical Journal, Published in the Interest of the Profession of the Great West.

SUCCESSOR TO THE
COLORADO CLIMATOLOGIST AND DENVER MEDICAL NEWS

FOUNDED BY DR. CHARLES S. MANLY, IN 1894.

VOL. III.

DENVER, COLO., MARCH, 1897.

NO. 3

Original Communications.

FRACTURES OF THE NECK OF THE FEMUR. *

By CLAYTON PARKHILL, M.D.,
Denver, Colo.

*Professor of the Principles and Practice of Surgery and Clinical Surgery in the
Medical Department of the University of Colorado; Visiting Surgeon
to the Arapahoe County and St. Luke's Hospitals; Surgeon-
General National Guard of Colorado, Etc.*

We have for examination to-day a man who tells me that he slipped on the icy pavement and fell, striking his hip, and we will examine him together this morning. I am glad to be able to show you this case, because there is perhaps no class of injuries which requires a more careful examination than those about the hip joint, and there is no class of injury in which a careless examination is more frequently made. A careless examination may result not only disastrously to the patient, but also to the surgeon.

We have placed this man upon a table covered with blankets. It is impossible to make a thorough and satisfactory examination of the hip unless the patient be on a flat, firm surface. A soft yielding bed will absolutely prevent accuracy. I do not mean to say that certain cases that are perfectly obvious may not be diagnosed with the patient in bed, but in any case of doubt a scientific examination of the hip cannot be made under such circumstances.

The first point to be taken into consideration in the examination of injuries about the hip joint must be the history of the case. This man is 81 years old. This fact is extremely suggestive, because we know that old persons are very liable to fractures of the neck of the

* A Clinical Lecture Delivered at the Arapahoe County Hospital January 6, 1897.

femur. He slipped on the ice, striking the hip. Here was the application of direct violence to the part. If he were a young and vigorous adult we would expect a dislocation rather than a fracture, and it would probably be extra-capsular rather than intra-capsular. In a man of his age the probabilities of the fracture would be strongly in favor of intra-capsular.

The second point in our examination would be inspection. You will observe that as he lies supine the injured extremity is rotated outward and the outside of the foot rests upon the table. The extremity also seems to be shortened. This may or may not be true, as shortening of the lower extremity cannot be accurately determined by inspection. You will also observe the fullness in front of the joint. This may be evidence of fracture of the neck of the femur. On the other hand, it may be a simple swelling due to injury or pre-existing disease. We observe no abrasions or ecchymoses in the region of the hip.

The third point in our examination should be palpation, and in this part of our evidence a number of facts may be elicited. Placing my fingers between the great trochanter and the crest of the ilium I find that they sink deeply in, much more deeply than the fingers of the other hand do upon the other side in which there has been no injury. Using them in a similar manner below the trochanter I find the same result. This is what is known as Allis' test for fracture of the neck of the femur. You will recall that the fascia lata on the outer side of the thigh is a dense and inelastic membrane attached above to the crest of the ilium and below to the head of the fibula. It is stretched over the great trochanter as a violin string is stretched over the bridge of that instrument. You will readily understand the relaxation that occurs in the violin string when the bridge is broken in half, and the same result obtains in the fascia lata when the neck of the femur is broken, consequently when we press above the trochanter and below it in a case in which we have a fracture of the neck of the femur the tissues give under the fingers, instead of being tense and resistant. This would seem in this case to be evidence of fracture of the neck. Grasping the lower part of the leg with my right hand I place the left over the trochanter and rotate the extremity, expecting to determine two points. The first is, is there crepitus? The second, what is the axis of rotation? But you might ask, is not this a hazardous procedure? I would tell you yes. It is a procedure which must be adopted with the most extreme care. If this case were an impacted fracture of the femur, a very trifling rotation might break up that impaction which would be decidedly detrimental. An impaction of the neck should never under any circumstances be broken up. Without impaction in a patient of this age, bony union is rarely if ever secured.

However, the resident surgeon, Dr. Shippey, tells me that in his examination crepitus was elicited, so we may move the extremity with freedom. On rotation crepitus is certainly perceived. It is perceived by the touch and not by the ear. Manipulation of fractured bones sufficient to enable a surgeon to hear their grating, is rarely if ever justifiable.

I now observe the arc of the circle described by the great trochanter as I rotate the extremity. On comparing it with the other side I find that it is very much smaller. This must mean that the radius describing this arc is shorter. We have another fact in evidence of fracture of the neck, the last thing to be observed by palpation, the patient complains of tenderness and pain upon pressure, both in front and behind the joint, as well as over the trochanter.

The fourth point in our examination will be mensuration. There is probably no test of injury about the hip which is resorted to so frequently and upon which so much reliance has been placed, as the tape measure, and I think I am safe in saying there is no method of examination so carelessly and inaccurately applied. To compare the length of the lower extremities it is necessary to measure from a fixed point with the extremities in corresponding positions. The patient should lie flat upon his back as he does upon this firm table. I now find the anterior superior spines of the ilia. I place a straight edge across the pelvis laying directly over these spines. Any straight article will answer for this purpose, as a ruler, yard stick or a piece of board. This line will mark the horizontal plane of the pelvis. In using the term "horizontal" in this connection I mean as applying to the pelvis when the man is in an upright position. From the middle point of this horizontal plane I drop my tape measure vertically. I now arrange the extremities in a corresponding position to get an accurate measurement of the limbs.

Applying one end of the tape measure to this straight edge I drop the measure to the internal malleolus upon the left side. I find the measure to be $34\frac{1}{2}$ inches. I now make corresponding measurement upon the right side and find it to be $35\frac{3}{4}$ inches, showing a difference in length of $1\frac{1}{4}$ inches. This would seem to show that there is a shortening of $1\frac{1}{4}$ inches upon the left side and yet we must remember the length of the extremities normally is not necessarily the same, so that it is only when considered with other evidence that we would be really justified in concluding that this represents the shortening. We will now make another measurement test. It bears the name of Bryant, the famous English surgeon who proposed it. We take our straight edge and place it vertically on the table in such a position that it corresponds exactly with the anterior superior spine of the

ilium on the left side. We now find the top of the great trochanter and measure from that to our straight edge on a horizontal line. I find the measurement to be two inches. I now make a similar measurement upon the other side and find it to be $3\frac{3}{4}$ inches. This shows a difference of $1\frac{1}{4}$ inches, precisely the discrepancy we found in the length of the extremities. Your books on surgery will describe this test as a triangle, completing the measurement by drawing a line from the anterior superior spine to the top of the trochanter. This line is superfluous. There is no need of the triangle. It amounts simply and only to a measurement from the top of the great trochanter, to the horizontal plane of the pelvis cut through the anterior superior spines of the ilia.

I will now make what is known as the Nelaton test. Taking the end of my tape line, I carry it underneath the hip of this patient on the left side, until my fingers rest over the tuberosity of the ischium. I now draw it evenly around the hip until it rests over the anterior superior spine. While an assistant holds it over the spine I observe the relationship of the great trochanter to this line and find that the trochanter is above it. Repeating this upon the opposite side you will observe that I find the trochanter to be below the line.

Taking into consideration the $1\frac{1}{4}$ inches shortening of the entire extremity, the $1\frac{1}{4}$ inches shortening as shown by the Bryant test and the fact that the trochanter is above the line in the Nelaton test, we are warranted in concluding that the entire shaft of the bone is displaced upward, and that its normal relationship to the ilium is altered. When we further take into consideration the other tests that we have made, showing the relation of the fascia lata, the shortened axis of rotation, crepitus in the region of the neck of the femur, fullness in front of the joint and the external rotation of the whole extremity, we are warranted in concluding that there is a fracture of the neck of this bone.

Now that our diagnosis is made, the next question which interests us is that of prognosis. Will this patient, who is 81 years old, get bony union of this fracture by any known method of treatment? He probably will not. Bony union is rarely, if ever, obtained in one who has reached so great an age.

The most favorable outcome which we may hope for in this patient is a short fibrous union, and many patients with such are able to walk without even the aid of a walking stick, although some may be obliged to use a cane, and others crutches for the remainder of their lives.

Now you might ask me what treatment would be proper to institute in a case of this kind. I would reply that every case must be

treated upon its individual conditions. This man is not as old as his years. His muscles are full, firm and strong. His circulation is good. His digestion is excellent. We might therefore conclude that it would be possible to confine him to his bed for ten or twelve weeks, which would be necessary to secure the best results which we might hope for in such a person. But I am told that he has an enlarged prostate, entailing frequent urination. On inquiry, however, I find that he is able to void his urine as he lies upon his back. If he had reached the "catheter" stage, or if he could not pass urine lying down, I should certainly not recommend that he be absolutely confined to his bed by any method of treatment. As it is, however, we will make an attempt to secure at least short fibrous union. However, if this patient had been as old as most persons of his years, with flabby muscles, imperfect circulation, feeble digestion and poor assimilation, I would recommend that no treatment should be instituted which would confine him to the recumbent posture. Such treatment would certainly result in the formation of bed sores with their accompanying dangers of exhaustion from pain, suppuration and sepsis. Such a patient should be gotten out of bed into a reclining chair, or some such arrangement, keeping the injured extremity sufficiently quiet only to relieve the pain and be given the benefit of gentle exercise, fresh air and sunlight.

On this man we will apply a simple Buck's extension, the application of which I show you, and an external Physick splint. We will look carefully after his digestion and assimilation. We will see that he is properly bathed and his back and buttocks toughened with alcohol. We will see that the sheets are kept tightly pinned over the mattress, so that no creases may be found in them, and trust that he may have a sufficiently good result to once more walk upon this extremity.

IN ITS book review column, the *Buffalo Medical Journal* for March, 1897, has the following to say about the "Transactions" of our State Medical Society: "Colorado seems to possess an uncommonly active and progressive state medical society. We have heretofore had occasion in these columns to refer to the value of the work done at its meetings, and the excellent form in which the proceedings are published. The present volume indicates that no step backward has been taken by this Society. The book is full of interesting, well-written papers, and some of the discussions are extremely spirited and creditable. We bespeak continued success for the Society, that now numbers about 300 members.

MILK AS A FOOD, THE FERMENTATIONS TO WHICH IT IS LIABLE AND THE VALUE OF PASTEURIZATION. *

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Chemical examination of the animal body shows that its complex constituents may be grouped under two great heads, the organic and the inorganic. The organic may again be subdivided into the nitrogenous and the non-nitrogenous. Proteids, or albuminous bodies, with their derivatives, represent the nitrogenous group—the hydro-carbons or fats, and carbohydrates or starches and sugars, with their derivatives, the non-nitrogenous. Water and various salts constitute the second, or inorganic group. In animals life depends upon the constant appropriation of oxygen, its union with the different constituents of the body, by which heat and force are developed, and through which process of oxidization the complex organic tissue constituents are reduced to simpler inorganic forms and removed from the body through the different excretions. Unlike the plant, the animal is incapable of building up organic constituents from inorganic material. The most that it can do is to transform a member of one class of its constituents into another member of the same group.

As all the chemical components of the animal undergo this process of waste and removal, to preserve the necessary balance all must be replaced by foods. There must, therefore, be an exact correlation between the constituents of an organism and the aliments required by that organism. The demand for aliment is governed by the waste. If the supply is not as great as the waste, the body loses weight. If, on the contrary, as in youth, the supply is greater than the waste, the body increases in weight.

Not only must the foods taken to repair waste have a certain weight, but they must also have a definite quality, since nitrogenous and non nitrogenous materials, water and inorganic salts all escape through the different excretions, and their losses must be supplied by analogous substances in quantities in proportion to the amounts lost by excretion. Under all circumstances the foods of animals are organic, and these foods for the most part contain those inorganic substances already prepared, which form these constituents of the animal body; they must therefore be analogous and equivalent to what they

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replace. The animal economy does not, as does the plant, supply its nutritive wants by synthesis and condensation of the substances contained in its food, but it requires the constituents of its flesh and blood to be already formed in its food.

Animal foods, therefore, which are destined to supply the waste of tissues, to be complete must contain already made all the tissue constituents which are liable to waste. For all mammals such an ideally perfect food is found in milk.

"Milk is the body of the mother, liquified in the mammary gland, prepared in the most perfect manner for absorption with the least tax on the undeveloped digestive functions and containing all the tissue constituents adjusted in exactly the proportion required to replace the losses of the body."

All mammals, therefore, while sucklings, are carnivora, and it is only necessary to contrast the short, simple alimentary canal of the suckling herbivora with the highly complicated digestive apparatus of the adult vegetable feeder; or the rudimentary undeveloped, digestive organs of the infant, or even the suckling carnivorous animal, with the adult forms of the same types to recognize that milk contains no waste matter like the indigestible hulls of vegetables or the tough gristle of animal tissues; all its constituents are equally and readily digestible.

Milk contains inorganic salts, represented by compounds of sulphur and phosphorus with sodium, potassium, chlorine, lime, magnesium, iron and silica. These are fundamentally devoted to bone building, but also form essential constituents of the blood, digestive juices, nerves, muscle and other tissues. Water constitutes 70% or more of the weight of even the higher animals and is a necessary ingredient of the tissues to permit of the process of oxidization and hydration without which life is impossible. As all the excretions are largely water, this must also form a large percentage of the food. Milk contains about 88% water.

Of the organic materials which must be found in a perfect food, in milk the carbohydrates are represented by *lactose*, a heat producing substance, intermediate in its chemical and physical properties between cane sugar and starch. The starches represent by far the greater amount of this group of food principles consumed by the adult animal, but to be absorbed starches must first, through the action of special ferments, be converted into sugars. But the digestive juices of the infant contain little or none of this diastatic ferment; the infant therefore can only imperfectly digest starch and must be provided instead with a soluble carbohydrate which it obtains in the form of *lactose* or milk sugar. Vegetable sugars, such as *saccharose* or *glucose*

from the readiness with which, in the short undeveloped digestive canal of the infant, they undergo fermentation are imperfect substitutes for this animal sugar. When cow's milk is used as a substitute for human milk, cane sugar is usually added to supply deficiency of sugar, from its supposed preservative quality and the difficulty with which it undergoes lactic acid fermentation. This is true when in a high degree of concentration, but when diluted cane sugar ferments readily. Besides Bernard found that seven grains of milk sugar in one ounce of water could be injected subcutaneously in a rabbit without causing sugar to appear in the urine, while the same amount of cane sugar under the same conditions caused elimination of sugar in the urine. Cane sugar also undergoes butyric acid fermentation more readily than milk sugar. As the infants' digestive juices are incapable of digesting starches it has been proposed to make use of the diastase of malt to supply the deficiency of this ferment so as to permit of the use of starchy foods, but the sugars resulting from the action of diastase are, like other vegetable sugars, not identical with lactose and are all more prone to fermentation, and by the gases and acids so produced are most frequent causes of colic and other forms of indigestion.

As muscular movement is one of the main sources of animal heat, and as the infant is unable to keep up his animal heat by locomotion, we find here the explanation of the fact that in human milk lactose is relatively the largest constituent, being more than *six per cent.* of the whole milk and about half its total solid matter, while in the milk of the cow it constitutes only about *four per cent.* and not much more than one-fourth the total solids.

Fat forms the other non-nitrogenous organic substance found in milk and is destined not only to supplement the lactose as a heat producer, but to supply that redundancy of fat which is such a characteristic of well nourished infants; for it has been abundantly demonstrated that the greater the amount of fat stored up in the body the less will be the waste of the albuminous tissues and the greater will be the value of the albuminous food constituents. Further no fat can be absorbed without first being *emulsified*, which simply means that the oil particles must first be minutely subdivided and mechanically held in suspension. In milk the fat is already emulsified and exists in the form of minute globules, the number varying from two to three and a half millions in each cubic millimetre, depending on the richness of the milk in fat. It is the existence of this emulsion which explains the opacity or "milky" of milk. It may be stated in a general way that on an average human milk has one-half of 1% more fat than average cow's milk and $2\frac{1}{4}\%$ more lactose; one-half of 1% less mineral matter and only one-half the quantity of albuminoids,

There seems, however, to be a greater variation in the amount of fat in human milk than in that of the cow. Professor Leeds, in analyzing 84 samples of human milk, found the fat to vary from 2% to 7%, and he gives the mean as 4%, which is, however, nearly 1% higher than the average given by most other authorities.

The albuminoids in milk are represented by casein and lactalbumin. *Casein*, or the curd forming element, is held in solution in milk by its combination with alkali-albuminates in the presence of calcium phosphates. In cows' milk it forms about *three and a half to four per cent.* of the whole milk, in human milk only about *two*, or *two and a half per cent.* We see therefore why cows' milk should be diluted before being a suitable food for infants. In the digestion of milk the first step is the precipitation of the casein in the form of a curd, in flaky particles in human milk, in cheesy clots in cows' milk, through the action of the dilute acids and rennet—a special milk curdling ferment of the stomach, and its subsequent solution and conversion into peptone through the action of the peptic ferments of the gastric and pancreatic juices. When milk coagulates spontaneously, the process, as will be subsequently treated of more at length, is due to the development of lactic acid through the fermentation of galactose or milk sugar. The curd is then a tough, white, jelly like mass, containing all the casein and fat, floating in an opalescent fluid, the whey, which contains most of the water, sugar and salts and lactalbumin, a soluble proteid which is present only in minute quantities. While the proteids of human milk and cows' milk both consist of casein and lactalbumin, in addition to the difference in amounts of each present in the two forms of milk, there are also differences in their behavior to acids and ferments.

Dilute acid, in the strength found in gastric juice, precipitates the casein of cow's milk in clots, while the casein of human milk requires more acid, and a fine flocculent powder is thrown down which dissolves in an excess of acid, while in both, lactalbumin remains in solution in the whey after the formation of the curd. In both the lactalbumin is coagulated by boiling. In *cows' milk* the amount of proteids precipitated by acid is about *four times* the amount of proteids which are not so precipitated. In human milk these proportions are reversed, the *non-coagulable* proteids forming about *twice* the amount precipitated by acid. This fact serves to explain how readily the infant's digestion is overtaxed by even small amounts of undiluted cow's milk.

In a long series of analyses by Professor Leeds the fact has been emphasized that as in cows' milk, so also in human milk, there is no progressive change in its composition during lactation, but after the function has become normally established the composition remains

substantially the same during the entire period. This fact is at variance with the notions which have led to elaborate, but useless, dietaries for infants. The healthy breast-fed infant obtains more nutriment day by day in accordance with the needs of its growing body, not by absorbing "stronger and stronger" food, but by an increase in the quantity of milk in accordance with the dictation of its appetite and nutritive needs.

The amount of *inorganic* matter in *cows' milk* is three times as great as in human milk. The difference is mainly due to the excess of calcium phosphate, which is four times as great as in human milk, and which is proportionate to the excess of casein in cows' milk, with which this salt is principally combined. As therefore cows' milk already contains a great excess of lime salts over human milk, it would seem unphilosophical to use lime water for diluting cows' milk for infant food, though the addition of lime water, by partly neutralizing the acid of the gastric juice, may perhaps permit of the passage of the milk unchanged into the intestine, there to undergo digestion. When, however, as is often the case, cows' milk has an acid reaction one-sixteenth part of lime water will usually (unless the acidity is so great as to render the milk unfit for food) make the reaction correspond to that of human milk, while the small amount of mineral matter (less than three-fourths of a grain of calcium hydrate to the ounce of water) may be neglected.

The value of the method, so generally popular, of adding arrow-root, farinaceous and gummy substances, etc., to cows's milk when used for infant feeding, depends upon the popular notion as to the increased digestibility of the casein of the milk produced by this *mechanical attenuation*. Dr. Rotch, however, maintains that starchy attenuants do not produce the result claimed for them in preventing the formation of a solid curd when the milk is acidified. He found in a series of experiments that simple diution with water produced the finest curd of all.

That cows' milk may resemble human milk it is therefore necessary, for infant feeding, that the proportion of casein be reduced by dilution, that the deficiency of sugar still further accented by dilution be replaced by the addition of milk sugar, and that the fat which also becomes reduced below its proper proportion by dilution should be made up by the addition of cream. Cream, however, cannot be regarded as the basis on which the food can be built up, but only as supplying the one food principle, fat. For when cream is separated from milk the fat contents of the cream may vary from 20% or 25% to 60%. The lactose and inorganic constituents being in a true solution will be proportionate to the amount of water in the cream or inversely to the

amount of fat. The proteids, however, mechanically adhere to the fat, so they will be present in cream in somewhat larger percentage than in whole milk in proportion to the amount of water present.

Nevertheless the total amounts of salts, sugar and albuminoids will be far less in any given amount of cream than in the same amount of whole milk. This is shown in the following analysis from Blyth:

	FRESH MILK.	CREAM.	SKIM.
Fat.....	3.64	67.63	.46
Casein.....	2.73	1.17	2.88
Albumen.....	.68	.25	.49
Sugar.....	4.69	2.25	5.34
Ash.....	.71	.12	.72
Water.....	87.55	28.58	90.11
Total Solids.....	12.45	71.42	9.89
"Solids not Fat".....	8.81	3.79	9.43

Therefore while 100 pounds of cows' milk will contain about $3\frac{1}{2}$ pounds of fat, $3\frac{1}{2}$ pounds of albuminous bodies, $4\frac{1}{2}$ pounds of sugar and $\frac{3}{4}$ pound of salts; 100 pounds cream will contain 67 pounds of fat, only $1\frac{1}{2}$ pounds proteids, $2\frac{1}{4}$ pounds of sugar and $\frac{1}{8}$ pound of inorganic matter. Other analyses show somewhat different figures as seen in the following tables, though the differences do not greatly modify the general result:

	FAT.	SUGAR.	PROTEIDS.	ASH.
Thus if the whole milk contains.....	4.00	4.30	4.00	0.65
Cream (16%) will contain.....	16.00	4.00	3.60	
Skim Milk.....	0.13	4.40	4.00	
HUMAN MILK.	MARE'S MILK.	COW'S MILK.	ASSES' MILK.	
Water.....87-88%	82.8	86-87%	91.00	
Total Solids.12-13 "	17.2	13-14 "	9.00	
Fat.....4 "	6.9	4 "	1.3	
Albuminoids 2 "	1.65	4 "	2.00	
Milk Sugar.. 7 "	8.65	4.5 "	5.30	
Ash.....0.2 "		0.7 "	.40	

Summary of American analyses published by the Vermont Experiment Station:

	TOTAL SOLIDS.	FAT.	CASEIN.	ALBUMEN.	SUGAR.	ASH.
Milk....	13.00	4.00	2.60	0.70	4.95	0.75
Skim....	9.75	0.30	2.75	0.75	5.15	0.80
Cream..	25.95	18.80	2.00	0.50	4.15	0.50
B't'r milk	9.50	0.50	2.40	0.60	5.30	0.70

Normal cow's milk, therefore, contains three classes of substances:

1st. *Substances in suspension*, including nuclein, an organic compound containing phosphorus, and fat globules.

2nd. *Substances present in a colloidal* condition including casein and lactalbumin, the former being combined with an alkali and probably also lime and phosphoric acid.

3rd. *Substances present in solution*, including galactozymaze, or starch ferment, milk sugar, common salt and soluble compounds of phosphoric acid.

Galactozymaze, an albuminous ferment only found in minute quantity, supplies in a small measure the lack of diastatic ferments in the saliva of the infant and helps digest the starchy matters which soon come in with the vegetable food that the mother must give the growing child and assist in making the transition to adult food.

"Such is milk taken as nature intends it to be taken direct from the healthy mother. Herein is no opportunity for subsequent changes and decomposition. Such also is milk as it exists in the udder of the healthy cow; there it contains no ferment or micro-organism capable of bringing about souring or other deleterious change."

These always come from without, from the outside. How to prevent them from getting in, or how, after they have got in, to keep their number as small as possible, or still better, utterly destroy them without at the same time injuring the milk, will now occupy our attention.

Advancing civilization is gradually reducing the number of breast-fed infants, and scientific artificial feeding is accordingly acquiring a greater and greater importance. As cows' milk is the universal substitute for human milk I will at present call your attention to the conditions essential to the production and preservation of pure cows' milk. On some future occasion I hope to be able to consider more at length the practical modifications in its composition which are necessary to render it an efficient substitute for human milk, and I am now making preparations which in the near future I hope will enable me, at the Broadmoor Dairy, to fill physicians' prescriptions for pure milk of any desired chemical proportion.

It has been proved beyond question that if milk is drawn from the udder of a healthy cow without exposure to the air and then kept in hermetically sealed, sterilized glass vessels, it may be preserved indefinitely without undergoing souring or any other fermentation. But the difficulty of such a treatment may be recognized when the size and weight and universal distribution of bacteria, the lowest form of plant life, is remembered. For example, the common lactic acid bacterium, which causes souring of milk, is only about 1-8,000 of an inch long and 1-25,000 of an inch wide. Imagine, then, the size of an organism 25,000 of which when placed side by side would only span an inch; while it has been estimated that 900 billions of these

organisms would only weigh about 1-28 of an ounce. Such organisms may hide everywhere—they have been found in air, soil, water, dust; on our clothes and skin, in the alimentary canal of man and animals, in our food, in fact every conceivable location that could be examined has been found teeming with myriads of this lowest form of plant life. This universal distribution of bacteria may be realized when the phenomenal rapidity with which they multiply is understood. The most common form of reproduction of such organisms is by *division* in which one cell divides into two equal parts (fission), each half then constituting a separate organism. It has been found that under favorable circumstances only twenty minutes need elapse between the division of the parent cell and the reproduction of the new bacterium. Hence one bacterium under these conditions may in twenty-four hours be the ancestor of 16,777,214 new organisms. Fortunately, however, in nature such favorable conditions are seldom present, else would bacteria soon annihilate every other form of life. But on the other hand there is another form of reproduction, that by *spores* (or the formation within the bacterium of egg-shaped bodies which under favorable conditions of heat and moisture develop into bacteria), in which the power of resistance to unfavorable conditions is much greater than in the bacteria themselves. Thus, when sporeless bacteria are dried up they may lose their power of reproduction in a day or two, or at most, a week, but spores may preserve their vitality after years of dessication and resume their activity when again supplied with the proper conditions of heat and moisture. So also most bacteria are killed by an exposure of only ten minutes to a temperature of about 155° F., while spores of various forms of bacilli may survive after being exposed for hours to a temperature of 280° F.

But that bacteria may thrive, they, like other living things must be supplied with their proper nutriment, with certain conditions of heat and moisture—some require the presence of oxygen (aerobic), others require its absence (anaerobic). Nearly all require ready made carbonaceous compounds, both starches and sugars, and but few can live without albuminous matters and inorganic salts.

Substances, which by experiment have been found best adapted to the growth of bacteria, are called culture-fluids or media, and none are better suited to the development of bacteria than milk—as a result bacteria which get into milk from external sources multiply with the greatest rapidity. A few minutes after milking there have been found from 10,000 to 1,000,000 bacteria in each c.c. of milk, and as there are 946 c.c. in a quart, the number of bacteria in a few hours in one quart of milk may reach the stupendous amount of 9,000,000,000.

Schultz has shown that the number of bacteria in milk is not en-

tirely due to lack of cleanliness, but is partly due to germs working up into the teat, where under the favorable temperature they increase rapidly between the milkings, growing upon the trace of milk adhering to the outlet. They are largely washed out in the first portions of milk drawn. He washed the teats and udder of a cow and the hands of a milker in water and corrosive sublimate solution previous to milking and 200 c.c. of the first or fore-milk and strippings were caught in sterilized flasks which were then closed with cotton, immediately placed on ice and then tested by plate cultures.

He found in cows' milk, first portion, 55,566 germs per c.c.; last portion, sterile. In goats' milk, first portion, 50,836 germs per c.c.; last portion, sterile.

When no sublimate was used for washing hands, etc., he found in cows' milk, first portion, 97,240 germs per c.c.; last portion, 500 germs per c.c. Goats' milk, first portion, 78,718 germs per c.c.; last portion, 665 germs per c.c.

These figures are not unusual or fanciful, but only such as may be found in all samples of milk as usually prepared for market after only a few hours' standing. Upon milk the effects of these myriads of living organisms, organisms which only live by robbing the milk of its nutritive material, must be profound. The number of bacteria in milk is however of comparatively slight significance in determining the character of a sample of milk. Of course in a general way the number of bacteria will be inversely with the cleanliness observed, but the number present will also depend upon the nature of the bacteria, the temperature at which the milk has been kept, and the interval elapsing after milking.

Over 200 varieties of bacteria have been described as existing in dairy products. Some produce a pleasant flavor in milk and cream; others the reverse. Some are troublesome to the milkman but assist the butter maker. Others are helpful to cheese makers and some are hurtful wherever they are found, either from their pathogenic nature or from the fermentations which they cause. The most readily noticeable of these fermentations is of course the souring of the milk, or the breaking up of the milk sugar into lactic acid and the consequent curdling of the milk, or coagulation or rendering insoluble of the casein.

The souring of milk has been described as a natural process, since all specimens of milk, unless collected under the aseptic conditions already described will inevitably become sour. Whenever any acid is added to milk the milk curdles, *i. e.*, the casein which is normally in solution becomes coagulated. The casein in sweet milk remains in its state of solution and partial suspension so long as the

milk does not possess more than a small amount of acid, but when the acid exceeds a certain percentage then the casein is precipitated as a semi-solid white mass. Any acid will produce this effect.

In milk which apparently sours spontaneously the acid is developed from the decomposition of the milk sugar into lactic acid. It is a mistake, however, to say that the milk sours spontaneously. There can be no effect without a cause, and there is nothing in the milk, if rigidly protected from contamination from without (though the opposite used to be believed) which can start fermentation in the lactic acid. Souring of milk is invariably due to the entrance of bacteria, and ten varieties have been described which are capable of setting up lactic acid fermentation in milk sugar. They all produce curdling of milk, the lactic acid bacillus simply splitting up the molecule of lactose, plus the addition of a molecule of water, into four molecules of lactic acid. This is the usual process though under the influence of other ferments the lactic acid may itself break up into a molecule of alcohol and carbonic acid.

The lactic acid bacillus begins to grow at about 50° F., but forms no acid until the temperature reaches 59° F. At 140° F. its development is arrested.

Conditions which favor the development of the lactic acid ferment will facilitate the souring of milk. Of these, heat is the most efficacious; hence in summer souring takes place more readily than in winter, so explaining the popular notion that thunder storms curdle milk, while the fact is that the climatic conditions which have brought the storm about, are such as will most favorably assist bacterial growth. Without the presence of the lactic acid bacteria there can be no souring of milk, and milk which has been sterilized will certainly keep during thunder storms. Therefore cooling of milk will delay souring, the prevention of the entrance of the lactic acid germ will prevent it, and the destruction of this germ, when present, by heat will render souring impossible. A peculiarity of the lactic acid fermentation is that the accumulation of the products of the growth of the lactic acid bacillus finally arrests the process. After the acid developed reaches 0.8%, the formation of lactic acid ceases, even though a large amount of undecomposed lactose remains in the milk. If this acid be neutralized the process again commences.

While this fermentation renders milk worthless for food, the action of this bacillus is necessary to the manufacture of both butter and cheese and in recent times pure cultures of this germ have acquired a considerable commercial importance in butter making.

In addition to these fermentations in which an acid reaction is developed, the casein in milk may be coagulated even in an alkaline

medium. When this occurs in milk outside of the body, the milky appearance due to the homogenous emulsion of the fat is lost, and a soft white curd is formed, floating on a more or less clear opalescent or watery whey. This fermentation is entirely analogous to that produced by the addition to milk of rennet, the soluble milk-curdling ferment of the gastric juice and is produced precisely in the same way, only that in this case the rennet results as an excretion from a rennet-forming bacterium.

The analogy between this so-called spontaneous alkaline fermentation and the digestion of milk in the alimentary canal is even more complete. When milk is curdled in the stomach by the action of rennet (and free acid) this preliminary stage of digestion soon passes into a second stage in which the curd is dissolved and the whey again becomes milky from the liberation of the fat globules which are mechanically held in the meshes of the curd. An examination of the fluid now shows that the casein has disappeared and been replaced by peptone, a crystalloid albuminoid, the end product of normal digestion. For casein belongs to the group of colloidal or glue-like bodies, and as absorption takes place from the alimentary tract by osmosis, all colloids must first be transformed into crystalloids before absorption is possible. An examination of milk which has undergone alkaline fermentation will reveal a similar change. The curd breaks down, the fluid again becomes milky and the casein is replaced by peptones. When we compare these changes with what occurs in the digestion of proteids by the pancreatic juice the analogy is still more marked, for then an acid reaction is not, as in gastric digestion, essential.

Unlike the lactic acid fermentation the rennet and peptone forming fermentations are not self arresting through the accumulation of fermentation products, but progress to actual putrefaction, accompanied by the formation of leucin, tyrosin, ammonia and butyric acid.

In the alimentary canal the peptones resulting from the action of the digestive processes should normally be absorbed, but if produced more rapidly than can be absorbed, these peptones again break down into leucin, tyrosin, ammonia and butyric acid. In the digestive canal this putrefactive decomposition is brought about by the prolonged stay in the alimentary canal of indigestible substances such as starch, and indicates in the first place that starch should not form an ingredient of the food of the young infant, and, second, since an excess of albuminous matters in the food leads to the same result, that cows' milk containing about twice as much proteids as human milk, should be diluted before being a proper food for infants.

Just as we found that the results of the lactic acid fermentations were beneficial, or may be even essential, for butter making, so also the

rennet and peptone forming bacteria are useful in the curing, or ripening of cheese, in which process the casein is through the action of bacteria broken down into soluble albuminoids

While it has been mentioned that butyric acid might be produced in a late stage of alkaline fermentation, milk may also directly undergo butyric fermentation as a result of a special bacillus which belongs to the group of anaerobic bacteria, *i. e.*, those which thrive in the absence of oxygen. This bacillus is of all the most difficult to destroy by heat, as its spores resist a temperature far above the boiling point. Hence, if this germ should be present in milk, it will be impossible to sterilize milk by heat, especially as the heating will serve to dissipate the oxygen held in solution in the milk. The class of organisms which produce butyric acid are of little importance as far as milk alone is concerned, but it plays quite an important role in developing rancidity in butter, though mainly the composition of butter is to be regarded as a process of oxidation, a chemical and not a vital process.

In addition to these fermentations, various bacteria have been isolated and described which produced a so-called "slimy fermentation," a fermentation attended by the formation of a deep blue color, a "soapy" fermentation and a bitter fermentation.

The "slimy" fermentation sometimes produces great trouble in dairies, as it renders the milk worthless for food, though the decomposition is artificially and intentionally produced in the manufacture of Edam cheese. In Norway, also, a popular drink (Tattemjolk) is made from milk that has been rendered slimy by infection with the leaves of the common butterwort (*Pinguicula vulgaris*).

Numerous germs have been described which possess the power of making milk ropy, or viscid, in most cases at the expense of the milk sugar; all may be destroyed by a temperature of about 150° F.

The fermentation of milk attended by the development of color changes, of which blue and red are the most common, are also due to the growth of specific germs, and in all cases, as in the production of slimy and bitter milk, are due to contamination with germs derived from unclean surroundings. The blue color which develops in certain forms of cheese, such as Roquefort, is due to a similar cause. Red milk may, of course, owe its color to the presence of blood. It is also said to be due to the eating of sedges, scouring rush, the madders and plants containing a large amount of silica. But red milk may also be produced by bacteria, of which two different varieties have been described.

Buttermilk may owe its taste to the admixture with the food of herbs, such as the lupines which contain a bitter principle. In this neighborhood the common skunk weed renders our pastures worthless

for milch cows after about the first of August. With cows far advanced in lactation a bitter salty taste is sometimes noticed in the milk, but while these causes are not bacterial, several organisms have been described which impart a bitter taste to the milk. Troubles of this nature are always more prominent as the age of the milk increases, and are accompanied by the decomposition of the proteids, probably into peptones, but not necessarily by the formation of butyric acid. All of the germs which produce bitter milk are extremely resistant to heat, so when boiled or sterilized milk decomposes the change is nearly always accompanied by the development of an intensely bitter taste. Milk, like other sugar containing fluids, may also undergo alcoholic fermentation, but as in other similar cases this fermentation is not due to bacteria, but to yeast plants. Koumiss and Kephir are examples of alcoholic fermentation of milk brought about by the addition to milk of cane sugar and yeast.

While none of the bacteria which produce the above changes in milk are pathological, it is nevertheless true that many of the forms commonly found in milk may under conditions of excessive multiplication produce poisonous principles (toxins or ptomaines) which have been demonstrated to be capable of setting up serious digestive disorders.

[To be continued.]

THE PROFESSIONAL AND TECHNICAL SCHOOLS, ESPECIALLY THOSE OF MEDICINE, IN THEIR RELATION TO THE COLLEGE COURSE.*

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The question of the minimum amount of preliminary education necessary to qualify a student to enter a medical school, is a vexed one, and has been discussed often and at considerable length by eminent educators, both in and out of the medical profession. For those whose parents are possessed with abundance of this world's goods, a general and a professional education can possibly be obtained by the twenty-third or twenty-fourth year; but for those who have to struggle for the means to secure a general collegiate education, and then to earn money to obtain a medical degree, which latter now requires four years, it is impossible for them to obtain the degree of M. D. much before their thirtieth year. A large proportion of those physicians who have most adorned the profession of medicine by their great learning, close observation and profound

* Read at the Celebration of the completion of the new endowment fund of \$200,000 for Colorado College, Colorado Springs, held February 21, 22 and 23, 1907.

reasoning powers, have been those who in early life have had to earn the means by which their education was obtained.

There can be no class legislation by which the wealthy must have a better preliminary education to fit them to enter a medical school than is required of the poor. Besides the unconstitutionality of such legislation, such a distinction would lead to great abuse.

The standard of the general preliminary education required by the best medical schools to enable students to enter upon the study of medicine should not be lowered, neither should the degree of M. D. be less easily obtained than at present in our best medical schools; but some method must, or should be adopted by which even poor, young, struggling students may fit themselves to enter upon the practice of their profession before their thirtieth year.

In the *Journal of the American Medical Association* for February 22, 1890, page 276, Dr. J. E. Emerson, of Detroit, Mich., discusses medical schools in relation to the preliminary examination. At that time there were 121 medical schools in the United States, and but thirteen of these required any preliminary knowledge of Latin, and twenty-three had no obligatory preliminary examination. On the other hand, all the twelve schools of the Dominion of Canada required a fairly high standard of preliminary education before the candidate was admitted to the school. A successful attempt was made to make the requirements practically uniform throughout the Dominion. The preliminary examination for entrance to the University of McGill included: First, English language, with grammar and composition. Second, English history. Third, modern geography. Fourth, Latin, including translation and grammar. Fifth mathematics, including arithmetic, algebra, geometry. Sixth, elementary mechanics. Seventh, option, either French, German, Italian, Greek, logic, botany and elementary chemistry. Degrees in arts received from any university in the provinces or Great Britain (not in the United States) exempted the candidate from the matriculating examination. On comparing the requirements of the Canadian schools with those of the American medical schools, a deep sense of inferiority must be felt by every American physician.

In the same journal for June 21st and 28th, pages 904 and 934, the mutual relations of general professional education, are ably discussed by the editor. He believed the average time required for a youth to pass the primary, the grammar or preparatory school, and the college of liberal arts, and receive the degree of B. A., was so great that the addition of three or four years necessary to obtain a professional education made it unreasonably late before the student could begin to earn for himself.

Whether this was so, had been answered in the affirmative by many, and had received the serious attention of most of the eminent educators of this and other countries. Dr. William Pepper, provost of the University of Pennsylvania, in his address before the College Association of the Middle States and of Maryland, in November, 1889, thought as our society is at present constituted that it was essential for the vast majority of young men to get at profitable work by the time they were twenty-three or twenty-four years of age. Of course, this would necessitate all college work for obtaining the degree of B. A. to be done, if done at all, before the age of twenty-one years.

Harvard and Columbia colleges had discussed various measures for enabling the youth to enter upon professional training long before the twenty-third or twenty-fourth year. It was found on comparison that the average age of the graduates from both the colleges of liberal arts and those of medicine, law and theology in this country was considerably greater than the age indicated as most desirable, by Dr. Pepper. Various reasons were thought to explain this anomalous state of affairs and among them it seemed to amount to a great deal that the requirements for admission to the colleges had increased in a corresponding degree to the demands made upon the student for entering the professional schools. Dr. Pepper made the statement "that we are not educating in our colleges, despite the great increase in their number and wealth and advantages and the increased ease with which free tuition could be secured, any larger, if indeed as large, a proportion of our young men as we did ten years ago."

At that time three methods had already been suggested for remedying the evils complained of. The first was a reorganization of the curriculum of the preparatory schools, so as to enable the average student to enter college at his sixteenth or seventeenth year. Second, to so improve the modes of preparation that he might reach the present standard of qualification for the degree of B. A. by his twentieth or twenty-first year. Third, the readjustment of the studies of the senior year in college to suit the inclinations of the student so that his last year in college would count for his first year of professional study.

The editor of the *Journal of the American Medical Association*, and Dr. Pepper, urge that before adopting measures for the readjustment of the work in the various schools and colleges, that the whole educational system should be carefully reviewed in direct connection with the conditions and wants of modern society, with especial reference to their existence in this country.

I quite agree with the editor above referred to, that such a review would show that neither the high standard of requirements for entering college nor the length of time necessary for reaching the degree of B. A. prevents the larger portion of young men from graduating, as it is the amount of time consumed in the study of the classics almost to the exclusion of other studies of much more practical value and interest. Many educators would have the courses in the high schools, academies and colleges so graded and adjusted that the degree of B. A. might be obtained by the twentieth year, and at the same time students should obtain a good degree of mental discipline, considerable knowledge of the origin and use of language, a fair degree of knowledge of mental and moral philosophy, of physics, the natural sciences and history and literature.

In arranging any course of studies the capacity of the average student under circumstances of the middle classes in this country must be taken into consideration as a guide for the adjustment of the work for the brightest and dullest student as well as for those who are possessed of all advantages requisite to obtain an excellent education at a comparatively early age. The student who enters upon the study of medicine with a knowledge of physics, comparative anatomy, physiology and chemistry, should not be required to spend as long a time in the professional school as one who has no theoretical or practical knowledge of these subjects. In those colleges in which physics, biology, comparative anatomy and chemistry have been omitted in the last year's work of the student, the degree of B. A. does not fit him to take advanced standing on entering the medical school.

The General Medical Council of Great Britain has comparatively recently recommended that the time students spend in a medical school should be less for those who have a foundation well laid for medicine before or during their last year in college. It also advised that the student should be admitted to advanced standing in the medical school after having spent a year in a recognized school where physics, chemistry, etc., were thoroughly taught.

In the *University Medical Magazine* for November, 1893, volume 6, pages 72 and 73, Prof. William Pepper, than who no one in this country has done more to raise the standard of medical education, says: "The battle between the classics and the natural sciences has waged fiercely and both have come out victors." He thinks that no one would question the advisability of putting in the college curriculum groups of biological studies such as botany, zoology and comparative anatomy, so that the student might on leaving college en-

ter a medical school and receive advanced standing. He further states: "But while the college course has for some years been growing more liberal and while more numerous elective studies have been permitted, it is only recently that its development must be adapted to the requirements of the higher university schools. The standard of requirements for the B. A. degree and consequently that also for entrance to college was developed so rapidly that the primary schools could not at once adapt themselves to the new order of things, and an unreasonable and undesirable increase in the average age of admission to college followed.

"To acquire the B. A. degree at twenty-two or twenty-three years and subsequently the degree in law or in medicine only at twenty-six or twenty-seven years of age is to postpone unduly entering on practical life. The natural consequence followed. The medical schools which provided the longest and best course and which most earnestly desired the best preliminary training on the part of their students found that the proportion of those who held degrees from colleges or scientific schools began to fall off."

The educational system of Germany, of Austria and of France prove that it is possible to secure a liberal training in letters or in science followed by a thorough professional course, and yet so arranged as to permit the student to enter all branches of professional life or the higher employments of the state before the age of twenty-four or twenty-five years. So with us the school and college system will soon rapidly become more uniform and it will be recognized that the degree of B. A. should be obtainable at an average age of twenty years; leaving for post graduate courses the more highly specialized work in letters, science, or in pedagogy.

It seems to me that we may look forward to the time at no distant date when every candidate for admission to any professional school will have to present the degree of B. A., and only in those instances in which considerable attention has been paid to biology, comparative anatomy, chemistry and physics, during the last year of the college course, will the student be admitted to advanced standing.

In the *Journal of the American Medical Association* for June, 1896, volume 26, page 1,140, James Russell Parsons, general director of examinations of the state of New York, devotes considerable space to "Preliminary Education, Professional Training and Practice in New York." I cannot do better than to extract the following from his article: "The University of New York, established in 1784, is one of our oldest institutions. It is not a teaching body, but a state department, and at the same time a federation of 640 institutions of

higher and secondary education. Its administrative departments are five in number: regent's office, examination, extension, state library and state museum. Its objects as defined in the university law are, 'to encourage and promote higher education; to visit and inspect its several institutions and departments; to distribute to, or expend or administer for them, such property and funds as the state may appropriate therefor, or as the university may own or hold in trust or otherwise, and to perform such other duties as may be intrusted to it.'

"To the examination department, organized in 1889, are intrusted all examinations conducted by the regents, including pre-academic, academic, extension, higher, professional and technical. These examinations require annually 1,500,000 question papers, which are printed in the department on our own presses, by our own employes.

"In all examinations under the university, as fully set forth in the academic syllabus, 'It is the aim to test as far as practicable the thought power of candidates. Definitions, rules, principles and laws are of little value without a knowledge of their applications.'

"The system of alternative questions is in vogue; the question papers are framed along broad fundamental lines, and, if the students are adequately prepared, the chance of failure is reduced to a minimum.

"The excellent results achieved by these examinations are largely due to the sympathetic co-operation of teachers and professional men throughout the state. Intelligent criticisms and suggestions are earnestly requested, and always meet with careful consideration.

"Academic examinations in seventy-three branches are held by the regents of the university in January, March and June, in about 500 New York secondary schools; at the summer schools in August, and at central points in September, for professional and technical students only. They are also given once a year in other states when expenses are provided.

"The method of conducting regents' examinations was prescribed in 1864. Since 1870 all papers claimed by principals as meriting seventy-five per cent. have been re-examined at the regents' office. In 1895, 259,932 academic papers alone, not including those written by professional students, were submitted to the department. Of this number 28,701 or eleven per cent. were rejected.

"The phenomenal growth of these academic examinations under the revised system of 1891 is especially remarkable in view of

the fact that they are purely voluntary and that the university discourages all tendencies to over-examination.

"The regents were not required to certify to the preliminary education of those seeking admission to any professional study till 1882, when the court of appeals adopted a rule that all law students, unless college graduates, must pass certain regents' examinations. These requirements were raised in 1891, and again in 1894.

"The acknowledged value of the law student examinations led in 1889 to a similar requirement for medical students. This law was amended in 1893, 1895 and 1896. The statute that took effect March 21, 1896, fixes as the minimum preliminary education for medical degrees a registered four year high school course following a completed eight year elementary course.

"After January 1, 1897, all matriculants for medical degrees must either be graduates of at least a registered four year high school course, or pass equivalent regents' examinations.

"The registry list in the regents' office is constantly revised to meet changes in courses of study, and is the source of information in response to inquiries from all parts of the globe. An idea of the extent of this work is shown by the fact that credentials in twenty different languages were received last year.

"July 1, 1895, the new veterinary law took effect, and August 1, 1895, the new dental law, fixing the same preliminary education standard as that for medicine. Students may be matriculated conditionally, provided the conditions do not exceed more than one year's work; but all conditions must be made up before the beginning of the second annual course counted toward the degree.

"We see, therefore, that graduation from a registered high school is now the accepted New York standard for admission to professional study. In medicine, dentistry and veterinary medicine there is no exception. Pending another revision of the rules of the court of appeals, however, a law student unable to offer a three-year high school course, or its equivalent, may meet the preliminary requirement for admission to the bar by passing examinations in specified studies representing only two years of academic work.

"In 1895, 16,612 answer papers were written by candidates seeking admission to professional study, a growth of 106 per cent. in two years, 68.9 per cent. of these papers were accepted as compared with 59 per cent. of those written at the schools.

"Between 50 and 90 per cent. of these professional certificates are granted without regents' examinations, on evidence of the requisite preliminary education. This proportion will doubtless in-

crease under the new laws till it becomes at least 82.5 per cent., as in 1893.

"Graduation from a registered four-year high school course, after the completion of eight years in an elementary school, approximates the highest standard adopted by any country in the world for admission to the study of law or medicine, and is fully equal to the requirement of any other government for dental or veterinary students.

"In Germany the matriculant must have passed the *Arbiturienten* examen after completing the course of nine years in a gymnasium. This examination presupposes as much work as is usually covered at the close of the freshman year in a registered American college. Dentists and veterinary surgeons must have passed the examination at the close of seven years in a gymnasium or *Realschule* (*Zeugniss der Reife für die I eines Gym. oder einer Realschule*).

"In Austro-Hungary, Russia and Switzerland the requirements for matriculation to medical study are about on the same plane. In France the degree of *Bachelier es lettres* (equivalent to graduation from a full high school classical course), and additional examination in physics, chemistry and the natural sciences are required. A similar standard is maintained in Italy (*Licenza liceale*), Spain and Cuba (*Bachillerato* and a supplementary examination). In England the minimum test, fixed by the programme of the British Medical Council is comparatively low, though many English students have either passed a matriculation examination in art or hold the B. A. degree. In the Canadian provinces also the varying requirements do not present in any case more than the completion of a registered three-year high school course. The minimum test prescribed by the Association of American Medical Colleges is still lower and only includes a little more than one year of academic work."

At the annual meeting of the State Medical Society of New York, held in Albany, January 26, 27 and 28, 1897. Dr. Daniel Lewis moved that the committee on legislation be requested to present to the legislature an amendment to the present medical law, by which students graduated from a literary college should be credited with the last year of such study in such college.

Dr. D. B. St. John Roosa, in endorsing the resolution, said that "we have exceeded the requirement in Germany, so that a student could hardly expect to enter upon medical practice before he was thirty-one years of age, if he desired a liberal education and a medical training. The resolution was adopted."

HARVARD MEDICAL SCHOOL.

The present requirements for admission to the Harvard Medical School exact, besides a good English education, some knowledge of Latin, practical training in physics and chemistry, the ability to read and write at sight easy French and German prose, and an elementary knowledge of algebra, plane geometry and botany.

If, however, the candidate for admission to the medical school has studied three years in recognized colleges, technical or scientific schools, in which courses in anatomy, physiology, histology and general chemistry are part of the instruction, he may be admitted to advanced standing on the condition that he passes an examination in the above subjects.

"On and after June, 1901, candidates for admission must present a degree in arts, literature, philosophy, science or medicine, from a recognized college or scientific school, with the exception of such persons, of suitable age and attainments, as may be admitted by a special vote of the faculty in each case."

In addition to this all candidates, regardless of their presenting a degree must present satisfactory evidence of sufficient training in chemistry to enable them to pursue the courses in chemistry given in the school.

THE JOHNS HOPKINS MEDICAL SCHOOL.

"The medical department of this university is planned for the professional education of those students who have been especially fitted to receive its instructions by a course of preliminary training in the liberal arts, and in those branches of science, such as physics, chemistry and biology, which underlie the medical sciences. Men and women are admitted upon the same terms.

"As candidates for the degree of doctor of medicine the school receives:

"1. Those who have satisfactorily completed the chemical-biological course which leads to the A. B. degree in this university.

"2. Graduates of approved colleges or scientific schools who can furnish evidence (a) that they have acquaintance with Latin and a good reading knowledge of French and German; (b) that they have such knowledge of physics, chemistry and biology as is imparted by the regular minor courses given in these subjects in this university.

"The phrase 'a minor course,' as employed in this university, means a course that requires a year for its completion. In physics, four class room exercises and three hours a week in the laboratory are required; in chemistry and biology four class room exercises and five hours a week in the laboratory in each subject.

"Many inquiries have been received regarding the character

and amount of the requisite training indicated by the term "minor course" in these. In explanation it may be stated, with respect to biology, that the candidate should have followed for at least a year a laboratory course in the structure, life-history and vital activities of selected types of animal and vegetable life. In the chemical-biological course for undergraduates in this university the laboratory work, in biology at present includes the study of such types as amoeba, hematococcus, yeast, penicillium, bacteria, mushroom, hydria, vorticella, a fern, a flowering plant, the earthworm, lobster, anodon; the gross and minute anatomy of the frog, the development of its eggs, the structure formation, and the metamorphoses of the tadpole; the study and drawing of the bones of the human skeleton; the comparison of some parts of related vertebrate skeletons; dissection of a mammal; the field and laboratory study of some few flowering plants. The laboratory work is the more important part, the lectures and other exercises subsidiary. It is, of course, not to be understood that this curriculum of biological work must be rigidly followed. Courses in botany and zoology will be accepted as equivalent to the minor course, in biology in this university, provided the work in the laboratory has been adequate. It is important that the candidate should show ability to observe natural objects, to record the observations in words and drawings, and to use the microscope.

"The candidate should have followed a course in general chemistry for at least a year. This course should include laboratory work, about five hours a week through one year, and lectures and class room work covering the outlines of inorganic chemistry and the elements of organic chemistry. A good knowledge of the subject as presented in Remsen's 'Introduction to the Study of Chemistry' may be regarded as the minimum requirement. A fuller knowledge of chemistry is, of course, desirable.

"In physics, the candidate should have followed a collegiate course for at least one year. This should include four hours a week of class room work, and at least three hours a week of quantitative work in the laboratory. Special attention should be given theoretical mechanics and to mechanical and electrical experiments.

"3. Those who give evidence by examination that they possess the general education implied by a degree in arts or in science from an approved college or scientific school, and the knowledge of French, German, Latin, physics, chemistry and biology above indicated.

"Candidates who have not received a degree in arts or in science from an approved college or scientific school, will be required

to pass, at the beginning of the session, first the matriculation examination for admission to the collegiate department of the Johns Hopkins University, and then an examination equivalent to those passed by students completing the chemical-biological course which leads to the A. B. degree in this university.

The requirements of the University of Pennsylvania for candidates to enter the medical department are about as exacting as those of the Harvard Medical School, but less rigid than those of Johns Hopkins Medical School.

A study of the increasing requirements for students to enter the leading medical schools of the United States, during the last fifteen years shows that the demands upon this class of professional students are steadily becoming greater and greater. The standard for admission to medical schools has been raised more during the five years that have just passed than during the decade that immediately preceded this period.

What I have to say to-day relates almost exclusively to those mutual relations that should exist between the medical schools on the one hand and the preparatory and high schools, academies and colleges, including the universities, on the other.

The conclusions that may be reached concerning one class of professional schools are applicable with but little modification to all. It was King Agesilaus who, when asked what a boy should learn, replied: "That which he ought to do when he becomes a man." The educators in the colleges of modern civilization, up to a few decades ago, at least, seemed to have ignored the wise saying of the Spartan king, and were agreed that the more time that was spent in learning the dead languages and in eschewing everything that pertained to the utilitarian side of life, the better the collegiate graduate was educated. We have seen how thoroughly impracticable this kind of education has been for men who have entered the medical profession, especially of late, when so many technical subjects have to be studied before the student is thoroughly prepared to command a first class standing among the numerous graduates who take the degree of M. D. from the medical schools.

Let us review in brief some of the means that have been suggested by modern educators to harmonize the preparatory or collegiate education for the study of some profession.

The three methods already referred to consist, first, in a reorganization of the curriculum of the preparatory schools so as to enable the average student to enter college at the sixteenth or seventeenth year. Second, to improve the methods of preparation so that the student may be able to reach the standard of qualification for

the degree of B. A. within three years. And, third, to readjust the studies of the third year in college so that the last year of the college course may count as the first year of professional study, by including in the studies of this year physics, chemistry and biology.

The editor of the *Journal of the American Medical Association* advises, before adopting any of these measures, that the whole subject of education from the primary or public school through the universities, including professional schools, should be carefully reviewed in direct connection with the conditions and wants of modern society, more especially as it exists in this country.

He thinks the fault would be found not so much in the high standard of requirements for entering college, nor in the length of the college course for reaching the degree of B. A., as it would be in the kind of the chief studies embraced, and the paucity of other studies of more practical interest and value. The writer just referred to is strongly of the opinion that an undue amount of time is required, in the study of Latin and Greek to the exclusion of more practical studies.

Professor Pepper is also of the opinion that less attention should be paid to the classics and more to the natural sciences in college, especially for those who desire to study for a profession.

By a recent resolution of the State Medical Society of New York, it was resolved to ask the legislature to amend the law of the state so that students who are graduates of a literary college should be given advanced standing in the professional schools. Of course, we are led to suppose that the literary college here referred to must give instruction during the last year in those branches to which the first year medical student is compelled to devote most of his time.

Harvard College makes a provision that if a candidate for admission to the medical school has studied three years in a recognized college, technical or scientific school, in which a course in anatomy, physiology, histology and general chemistry are part of the instruction, he may be admitted to advanced standing on the condition that he passes an examination in the above subjects.

In the Johns Hopkins Medical School a special preliminary training is required in the liberal arts and in those branches of science, such as physics, chemistry and biology, which underlie the medical sciences, to enable the student to enter upon the study of medicine.

I am in accord with the remarks of the editor of the *Journal of the American Medical Association* in which he claims that the proportion of time given to the study of Latin and Greek is too great for

the student who expects to enter upon the study of a profession after leaving college.

The standard of general and professional education should not be lowered; but some agreement between the general and professional educational institutions of this country should be reached by which deserving, but poor, young men and women may prepare themselves to enter upon a life-profession before the twenty-eighth or thirtieth year. During the last year in the school or college from which the student takes his departure to enter the professional school, be it law, medicine or theology, the studies should be regulated that they will enable the candidate to take advanced standing in the professional school.

If a student of close application and good ability enters a college prepared to pass a preliminary examination, and works faithfully afterwards, he should be able to obtain the degree of B. A. and that of M. D. each in three years. This can be accomplished without lowering the standard of either degree if the courses in the college and medical school are so adjusted that studies completed in the former fit him for advanced standing on entering the latter.

Latin and Greek should receive attention in college, but not to a sufficient extent to exclude a fair knowledge of French and German and possibly some of the other modern languages.

For the student who intends to enter upon the study of medicine, his studies during the last year in college should include sufficient of physics, chemistry, biology and comparative anatomy to enable him to take advanced standing in the medical school.

Fitness for advanced standing can only be determined by the candidate passing a satisfactory examination in those studies to which the first year medical student is compelled to devote most of his time. Such an examination should be made by an impartial board of medical examiners appointed by the non-professional schools of the state.

As soon as possible the degree of B. A. should be required of all students entering upon the study of medicine, and in those cases in which such candidates are qualified in physics, chemistry, physiology and comparative anatomy, they should be admitted to advanced standing in the professional school. If we should inquire how the courses of studies in the general educational schools should be modified to enable the student to gain his degree of B. A., and his professional degree by the time that he has reached his twenty-fourth or twenty-fifth year, it is impossible to answer it without careful consideration. In the attempt at so desirable an end there is danger of making education too practical and too superficial. We

must remember that in any thorough educational course there are studies, the utility of which at the time the knowledge is acquired is often perceived. Much time has to be spent in training the mental faculties in various directions; in fact, in teaching the student how to study. The student has done well if he has simply learned *how* to study to the best advantage during the time required to obtain the degree of B. A. I feel that in our eagerness to make the studies in the colleges intensely practical, and thus allowing too great a number of subjects to become elective, there is danger of going too far. Perchance, if the pendulum of utilitarianism swings too far in our general and professional education systems, we may find that at the end of a few decades, that while the professional student may leave school with more practical knowledge and shine more brilliantly than the same class of students of the present time, yet it may occur that the students of the future may have minds less well and thoroughly trained than those who have graduated at a previous date. It can be readily seen that a greater proportion of physicians educated by the latter method would ultimately attain to greater eminence. The highest type of preliminary education for a man to enter upon the study of medicine, is one which trains the mind to habits of close observation, accurate reasoning and mental concentration.

This community has recently lost, in the death of Dr. Jacob Reed, one of our best and noblest physicians, both by nature and education. He had accumulated much knowledge, was a close observer, an accurate thinker, and had great powers of mental concentration. During his palmy days he stood without a peer in general medicine in the state of Colorado.

The ideal attainment for the medical science of the future is preventative medicine. To accomplish this much desired result, well trained observers are necessary. The study of medicine and sanitation must be combined. Much of the preparatory work can be done in the colleges. The work begun in the laboratory of the college can be carried on and greatly elaborated in the medical school. Nothing is grander and more elevating than the extermination of preventable diseases. The greatest advances in medicine and the most brilliant achievements made by the scientist have had their birth in laboratories.

We have seen that the greatest good to the greatest number can be accomplished by the colleges and the professional schools working in harmony; and that the curriculum of the former should be adjusted to that of the latter so that less time, without lowering

the standard of education, will be required to obtain the degrees of B. A. and M. D.

Before doing too much in this direction, however, the principal educators of all the general and professional schools of the country should confer together, and after due deliberation, endeavor to so adjust matters that more students will take the degree of B. A. and hasten the time when every candidate for admission to a medical school must have a literary degree and some training in the sciences that form the basis for a broad and comprehensive medical education.

New York Letter.

NEW YORK, N. Y., February 21, 1897.

To the Editor of THE COLORADO MEDICAL JOURNAL:

The impressions of a stranger in New York City are naturally arranged in a somewhat chaotic manner, and I will have to give you mine as something of a pot pourri. It has snowed three times and rained twice since I have been here; the sun shines a little while every day, as a rule, but during what is considered fair weather here it is usually so cloudy that I am always expecting it to rain in a few minutes. It is not very cold, and I can hardly say that it has been disagreeably so. That's enough as to the weather.

The noises of the city are not so terrible as I had been led to expect. The streets are quite clean, though they are full of carriages, wagons, cable and horse cars. I have not yet been mutilated in a sickening accident, as I had believed was the fate of the ruralite. I don't believe that the famous "Dead Man's Curve," on lower Broadway is any more dangerous than our own horror at Curtis and Seventeenth Streets.

I have been here a little over three weeks, and my observation during that time has convinced me that the New York Post-Graduate School and Hospital is a most magnificent institution. Here are met in lecture, clinic and operating theatre, the men whose writings we read, and whose words we quote as authority—we meet them in intimate contact and get their ideas as they cannot be obtained from any journal or text book. The big six-story and two-story basement building contains its own hospital for medical and surgical patients. In a month one will see almost every operation of which he has heard, and some that he never dreamed of. The attention to details of technique is, on the whole, satisfactory, but I have seen one or two things that would make our Denver surgeons

shake their heads. They were really small things, but infractions just the same.

Dr. Collins exhibited a case of idiocy, of a family type, whose main characteristic is an agenesis of the optic nerve, stating that it has been recently shown that the optic nerve is not a true cranial nerve, but a prolongation of the cerebral structure and that the layers of the retina correspond to layers of cerebral gray matter.

Dr. Seneca D. Powell demonstrates a thin membrane which constantly covers old leg ulcers; he removes this, applies pure carbolic acid by a pledget of cotton on a probe, then straps the ulcer with diachylon plaster. A 10-grain to the ounce solution of silver nitrate is used to stimulate granulation, if necessary.

Dr. Elliot says never to use vaseline as a basis for ointments in treating skin disease. A 15-grain to the ounce ichthyol ointment will often cut short the eruption of varicella. This ointment, or a little stronger, is used in infantile facial eczema.

Dr. Dana exhibited a case of hysteria major following traumatism. There was complete loss of tactile pain and muscular sense on left side of face and body, and left arm and leg, total deafness, anosmia and loss of taste on this side, the left field of vision was much contracted and the pharynx was completely anesthetic. It was learned that the patient used salt on her food, but the doctor said that where taste was lost, the use of salt was often a matter of habit.

Dr. Graeme Hammond says that children or infants who have had convulsions should be treated by sodium bromide during a period of at least from two and a half to three years. They should be carefully watched for attacks of petit mal for a long time after the convulsions have disappeared.

Dr. Max Einhorn's stomach bucket for obtaining samples of the gastric contents is a wonderfully neat instrument and is not in the least disagreeable to the patient. A little bucket, the size of a peanut, at the end of a silk thread, is swallowed, and after five minutes is pulled out, "and there you are," with none of the misery of the stomach tube circus.

Yesterday Dr. Kelsey removed an ovarian dermoid containing fat, a lot of hair and a tooth.

Dr. Hammond, by the way, is the champion fencer of the world, and I understand that he is studying law.

Now, Dr. Axtell, as to that article on osteopathy. Really the subject does not merit the dignity of a separate consideration, so I will make it a tail piece to this letter.

Some years ago "Dr." A. T. Still, after digging up a number of

Indian skeletons, came to the conclusion that all disease is due to a fracture or dislocation of bone. He also decided that the giving of medicine in disease was a confession of lack of confidence in God. He claims that disease should be cured by replacing the dislocated bone or setting the fracture. Later, dislocation of a tendon was added to etiology of disease, and still later it was decided that a twisted or strictured artery would also cause disease. There is no bacillus of tuberculosis, there is no plasmodium malarix, and no diphtheria germ. Doctors who give medicine are doing nothing but making whiskey and morphine fiends. Dr. Still has a college of osteopathy at Kirksville, Missouri.

A number of cases under osteopathic treatment in a town in northern Colorado have come to my knowledge. One was diagnosed as dislocation of the right twelfth rib and a manipulative treatment instituted. This case was afterward operated for appendicitis. A case of neurasthenia was called dislocation of the lower part of the spine! Treatment: Manipulation of the coccyx by finger in rectum; massage of the back; patient's leg pulled! A case of tuberculosis of hip-joint, which had been treated with tuberculin by Dr. Denison, was called "dislocated hip." Treatment by osteopathy failed. Dr. Denison will recognize this case as Miss M. S., of Fort Collins. Another case, pulmonary tuberculosis, with tuberculosis of hip joint (the latter diagnosis was made by Dr. John Ridlon, of Chicago, while in Denver a couple of years ago) was diagnosed as dislocation of hip. No improvement. Case of sciatica in a banker, diagnosed, I believe, as dislocation of a tendon, treated by the customary leg pulling; improvement at first; relapse later. Several cases of neurasthenia and hysteria in neurotic individuals have been "miraculously benefited."

I could give numerous others, but these will indicate the nature of this new imposture and fool "system." Their treatment of hip-joint disease (totally disproving of fixation and extension) by overcoming the muscular spasm by forced movements of the hip is the most vicious feature of this school, and its unfortunate victims will reap a pitiful harvest for their ignorance and foolishness. If the statesmen of Colorado recognize this institution by law, their assininity is of a magnitude compared to which the assininity of a pack of burros is as the sands of Sahara are to an infinite nonentity.

G. H. STOVER.

In what western medical journal can one get such a diverse variety of valuable medical articles as in THE COLORADO MEDICAL JOURNAL.

The Denver and Arapahoe Medical Society.

This report is original with this JOURNAL, and appears only in this Journal.

On February 9th the attendance of the Society consisted of Drs. Jayne, Spivak; Hershey, T. M. Burns, Denison, Crouch, E. J. Rothwell, Whitney, Thomas, Macphatter, Van Zant, Mussey, Mitchell, Wetherill, Lake, Malaby, Hall, Hopkins, Blaine, Richardson, McDermith, Zederbaum, Depeyre, Lucy, Bane, Nichols, Bonney, Beggs, McLauthlin, Rover, Rogers, J. J. Powers and Axtell.

Dr. Carroll Edson was elected to membership.

Dr. E. P. Hershey read a paper entitled "A Contribution to the Etiology, Pathology and Treatment of Gastric Disorders," and exhibited a number of instruments for use in making a diagnosis and giving treatment in gastric diseases. This paper will be printed in this Journal in April.

Dr. Crouch, in discussing the paper, said that he disagreed with the speaker in a great many points. His first disagreement was in reference to classifying stomach diseases as diseases of the mucous membrane. In his experience the atony of the muscular fibres usually brought the patient to the physician. To him it was surprising what marked disturbance of the mucous membrane of the stomach a patient could stand without symptoms. He regarded Dr. Hershey's idea of gastritis as false. He further thought a gastritis with slight secretion was rare. He usually found hypersecretion. In reference to the gyromele he thought it a dangerous instrument and did not use it. He also did not use green soap, as he thought it an irritant. His experience was that in cases tending to become chronic one ought to avoid irritation. For this reason he would not use the essential oils and he did not believe them necessary. In chronic gastritis organisms do not play a big part, for usually the motility of the stomach is good and its contents are emptied out and bacterial changes are not present. In carcinoma the motility is impaired and bacteria are numerous. Personally, he was not in favor of soft tubes. He wanted a tube flexible, but rigid enough to give firmness. He regarded the vacuum or bulb unnecessary. The expulsive efforts of the patient were sufficient.

Dr. Spivak thought the gyromele a dangerous instrument. In his opinion it could convert an erosion into an ulcer. For diagnostic purposes it had value and by rotating it one could easily feel the outline of the greater curvature. He believed Einhorn's spray to be of special value in nervous cases as gastralgia and even in anorexia. In cases of delayed propulsion it could be made to do duty by using a disinfectant.

Dr. Hershey asserted that his paper only dealt with the ordin-

ary diseases of the mucous membrane. He thought that repeated successful clinical use of these instrument was their best test of value. He could never agree that the expulsive efforts of a patient were better than the use of the exhaust bottle. He believed that every gastritis was due to the presence of micro-organisms. To use the gyromele for diagnostic purposes, as had been recommended, was to use it just at a time when it should not be used.

Dr. J. N. Hall read a paper entitled "A Report of Thirteen Cases of Consumption Contracted in Colorado." His paper was discussed by Drs. Axtell, Denison, Richardson, Beggs, Bonney, Hershey, J. J. Powers and Jayne.

Dr. Denison thought the array of tuberculosis contracted in Denver was very much less than in the east, even with the great number of cases that are already here. Dr. Richardson suggested a sanitary measure for Denver to consist of a street corner spittoon which would burn up expectoration.

Dr. Bonney said that in the cases which he had seen develop in Colorado that he could trace some direct, unhygienic cause in every case, and he believed that such cases would have developed anywhere and that no odium ought to be cast upon Colorado.

Dr. Hall in closing the discussion said he thought the cases ought not to be extensively reported as the facts might be used to our detriment by other health resorts. He reported that he had made a post mortem on a dog recently that had been fed on meat which had been chewed by a tuberculous patient and the dog had all the evidences of miliary tuberculosis.

The committee on inviting the American Medical Association to Denver reported that they had added Dr. Stedman and Dr. Solly to their committee. The meeting was then adjourned.

* * *

On Tuesday evening, February 23rd, the Society held its second regular meeting for the month. Dr. Jayne, the President, presided. Dr. G. Tyler, a graduate of Rhode Island College Hospital, class of 1889, having his office in the Kittredge Block, was proposed for membership by Drs. L. Freeman and C. D. Spivak.

"A Plea for Operative Treatment of Certain Fractures and Dislocations" was the title of a paper read by Dr. C. B. Nichols. In this paper the doctor advocated the cutting down upon certain fractures and dislocations, the tying of vessels, the removal of blood, the suturing of bones and the complete closing of the wound. He laid great stress upon the fact that such work should only be done by the modern surgeon in a modern aseptic way.

Dr. Dewitt, of St. Paul, Minn., who was present, was invited

to open the discussion. He thought the stand taken by Dr. Nichols was a radical one and that the operation was unnecessary in the great majority of fractures and even in bad fractures, for if a proper position could be secured, good clinical results were obtained. He thought the results of one surgeon of small value in settling vexed surgical questions. Personally, from a limited experience, he was convinced that the open treatment as advocated was bad. He had seen two cases operated on by this method who had died, one of shock, one of sepsis. He had read of four deaths occurring in New York hospitals from operations upon fractured patellæ. He said we can speak of thorough asepsis, yet to get such a condition was almost impossible. Given then a case where one could get along without an operation, he thought it better to do so. He agreed with the speaker in all that he had said with regard to ununited fractures, except as regards the use of silver wire. Personally he thought more of catgut and kangaroo tendon.

Dr. Parkhill believed that there was need for operation in fractures oftener than is usually done. He would have it done, however, only by a modern surgeon, in a modern hospital, in a modern manner. He had operated upon a number of cases of fractured patellæ, and believed that every case of such a fracture ought to be operated. His results in his last two cases had been very good. He found the knee joint full of blood, with much local bruising, yet the recovery was perfect. He spoke in detail of compound fractures, and felt that they were all better for an operation. Personally there were better methods of bringing the fragments together than wiring and incidentally he spoke of a clamp which he had devised for this purpose. This had been used now in fourteen cases with uniform success. In irreducible and ancient dislocations he would advise with the speaker, operation.

Dr. Freeman thought absolute aseptic surgery to be impossible and that the opening up of an area of bruised tissue would frequently prove a bad measure. He thought the stopping of a hemorrhage in a fracture would prove a difficult matter and he could not see that a hemorrhage here was of necessity harmful. He referred to the use of the X rays and thought that it would settle the question of properly set fractures. As regards fracture, of the patella, he could not believe that all of them needed operation. He had seen cures with fibrous union that were very satisfactory. He called attention to the fact that most patients would object to an operation and he felt that an operation would not be justifiable in most dislocations. He would admit with the speaker that more fractures should be operated on than had been in the past.

Dr. Malaby cited the case of a middle aged lady with fracture of the femur, on whom an operation had been made in a New York hospital, who died on the second day of sepsis.

Dr. Nichols closed the discussion by saying that he intended the paper to be radical. The cases he wanted operated were the bad cases we see about us, where the lesions are vicious. He presented the paper to get the surgeons to think. He believed a well conducted operation upon a fractured patella better than a union, even if it was ligamentous. For bad dislocations he had operated upon a thumb, an elbow, and a hip. In the latter case the patient had been pulled about very seriously.

The second paper of the evening was presented conjointly by Drs. H. W. Rover and T. M. Burns. The paper was entitled "The Value of Symphysiotomy in an Obstetrical Case Where a Tumor Obstructed the Pelvic Canal." Dr. Rover reviewed the subject in a historical sense, referred to a case which he had had in Cincinnati, already reported and gave in detail the history of his second case. A woman, pregnant for the fifth time, gave a history of a nine months baby with head presentation in which craniotomy had to be made. Her second child was turned and delivered, but the child was dead. Her third child was delivered at eight months, but died. For her fourth child an abortion was made at the seventh month, but the cord became prolapsed and the child was still born. The tumor occluding the pelvis was the size of a large cyst and was evidently an enchondroma from the sacrum. When he was called to see the case he advised symphysiotomy and he called in Dr. Burns. The child was easily delivered after this operation, and was living and well.

Dr. Burns reviewed the operation. He said the separation of the bones after the incision was fully $2\frac{1}{2}$ inches. On the seventeenth day the woman walked across the room and on the twenty-eighth she resumed her household duties.

Dr. Richardson spoke of the value of anhalonium lewinii with iodide of potash in septicemia and trifacial neuralgia. He gave the tincture in four drop doses on going to bed at night.

Dr. J. W. Graham reported for the Committee on the American Medical Association that success was crowning their efforts. Nine physicians in Denver had subscribed \$250 apiece, a host of others \$100 and things looked favorable to a big donation. The report was received and the committee continued with permission to enlarge their committee if they thought best.

Dr. Beggs brought up the matter of a public hearing, by the senate committee on state affairs, of a committee from the osteopaths

with an appeal for recognition. The matter elicited a great deal of discussion, in which Dr. J. N. Hall in his characteristic way defined for Dr. L. Freeman, osteopathy, in this way: "It is a species of medical quackery originated for the purpose of getting money out of the pockets of the people by all the legitimate means known to quackery." A termination to the discussion came in the form of a motion to refer the matter to the committee on legislation.

Those present at the meeting were: Drs. Rover, Hueker, Richardson, L. Freeman, Chase, Burns, Jayne, Hopkins, Beggs, Hassenplug, Hall, Parkhill, McCain, Spivak, Malaby, Nichols, Rogers, C. Johnson, Zederbaum, Love, Denison, Edson, R. Freeman, J. W. Graham and Axtell.

The Denver Clinical and Pathological Society.

The reports of the meetings of this Society appear monthly in this Journal.

Drs. Blaine, Bourquin, Coover, Craig, Fleming, L. Freeman, R. B. Freeman, Hershey, Hill, Hopkins, Howard, Jayne, LeMond, Levy, Lobingier, Lyman, Macphatter, Mager, McNaught, Powers, Walker, Wetherill, Waxham, Whitney and Axtell were the members present to enjoy a delightful evening with this Society at its regular meeting, February 12th. Drs. Hershey, Higgins, LeMond, Macphatter and Freeman were the hosts of the evening. Dr. F. E. Waxham filled the chair by appointment, as both President and Vice-President were absent.

After the reading and approving of the last meeting's minutes, there being no report from the membership committee and no nominations for membership, the Secretary read a letter from a former member, Dr. Edward Jackson. Dr. Hershey reported for the committee appointed to consider the plan of forming a protective association. At the request of the chairman, the committee was discharged as the plan seemed impracticable. Dr. Leonard Freeman's motion, made at a previous meeting, to remit the dues of the Secretary, was passed.

Drs. Barlow, Birdsall, Warner and Richmond, as guests were invited to partake in the evening's proceedings.

Dr. Macphatter reported a case of septicemia following an abortion and a curettement. Pulse and temperature were good, but vomiting persisted. Upon section the abdomen was found not to contain pus. Another case was reported in which a woman returned in two months after an abortion and curettement with probable malignant disease. He also reported a case of recto-vaginal fistula,

with offensive discharge which is probably due to malignant disease of the rectum. Also a case of cyst of the broad ligament bulging into the vagina. The cyst was removed per vagina. Discussion by Drs. Wetherill, Hershey, Craig, Jayne and Macphatter.

Dr. Hill reported the examination of sixteen urines in measles, only one of which showed nephritis.

Dr. Freeman reported a case of typhoid fever lasting three months, which was followed by a periostitis of the lower right ulna. Two skiagraphs were exhibited.

Dr. Craig reported an operation for gastro-enterostomy in a man forty-eight years of age. The pylorus was involved by the cancer. He also spoke of the good results sometimes obtained under most unfavorable conditions, and cited a case in which he operated and corrected a completely prolapsed uterus and bladder in a patient who suffered from marked organic disease of the heart. He laid much stress upon having a thoroughly competent anesthetizer.

Dr. Jayne reported having operated upon five cases of salpingitis by the vaginal route. In each case Douglas' cul de sac was widely opened through the posterior vaginal vault, and the intestines held back by gauze packing; adhesions were broken up, the tubes and ovaries treated or evacuated, cleaned and returned to the pelvic cavity and drained by gauze. By means of a strong electric light an excellent view of the pelvic cavity was obtained in two of the cases. In all the recovery was remarkably smooth and uneventful, and the results most satisfactory.

Dr. Axtell reported a marked case of measles in an eight months' baby, who two months previous had had its first attack.

Dr. Lobingier reported a case of carcinoma of the stomach in an old man. Exploratory incision proved it to be inoperable. He also reported a case in which four months after receiving a blow upon the lip a tumor appeared which proved to be a simple angioma.

Dr. Powers reported a case with exhibition of specimen of sarcoma of the left arm in a woman sixty-six years old. The tumor sprang from the facial and short tendon of the triceps, involving almost the circumference of the arm from the elbow to the upper third. He amputated at the shoulder, the operation being absolutely bloodless, due to the use of the Wyeth pins. Complete primary union was had on the sixth day. He also reported with exhibition of specimen, a case in which he completely extirpated the left parotid gland for a myxomatous carcinoma in a man twenty-six years old. There is a resulting complete motor and partial sensory paralysis of that side of the face due to the severing of the facial

and part of the trifacial nerves. Discussion by Drs. Hopkins, Walker and Powers.

Dr. Levy reported two cases of cut throats. In one he did a thyrotomy, the other closed without interference.

The society then adjourned to a lunch and some musical entertainment.

LEWIS M. WALKER, *Secretary*.

The Practitioners' Club.

This report appears only in this Journal.

The regular meeting of the Practitioners' Club was held February 2d, at the office of Dr. G. N. Macomber, with a good attendance of members. The subject of the evening was "Syphilis," presented by Dr. A. G. Case. An interesting historical account of the origin of the disease was first given, after which the details of its symptomatology and treatment were taken up. The speaker advocated the deferring of specific treatment (at least in cases of a doubtful primary sore) until the secondary symptoms clearly appeared. The question as to the time required for a practical cure and as to safety in marriage, was then taken up, the speaker's opinion and that of the members who discussed the paper being that at least eighteen months of steady treatment are requisite. Instances were cited of marriage after this lapse of time, unattended with any bad effects to either mother or offspring. An interesting discussion on the part of all present followed the reading of the paper.

C. B. VAN ZANT, *Secretary*.

Woman's Clinical Society.

The report of this Society's meetings appear in this Journal only.

The regular semi-monthly meeting of this Society was held on February 16th. There were present Drs. Bedortha, Lawney, Goodman, Yout and Gale. The Society was pleased to welcome Dr. Christy, of Philadelphia, as the guest of the evening. The minutes of the previous meeting were read and approved. The name of Dr. Kate G. Yout was proposed for membership by Dr. Annie W. Williams. This matter was referred to the board of censors. The medical programme consisted of the Report of Some Fifteen Cases of Continued Fever by Dr. Beaver. Dr. Beaver being unavoidably absent, her paper was read by Dr. Goodman. The cases reported occurred during the months of August, September and October last, when typhoid fever was quite prevalent. They presented no like features and were treated expectantly. In the discussion following, Dr. Lawney referred to the recent studies of the blood of typhoid pa-

tients as offering us the only means of differentiating between true typhoid and fevers of similar type. Dr. Bedortha reported a most interesting case of typhoid with low temperature (never above 102°) but presenting marked delirium, which became maniacal, yet the temperature fell instead of rising, patient becoming more and more violent until death. Dr. Christy reported three cases where sudden death occurred from heart failure after temperature had been normal for several days. In none of these cases had alcohol been used, from prejudice of the patients. In another case death from perforation occurred eight weeks after the temperature had become normal.

M. JEAN GALE, *Secretary*.

Weld County Medical Society.

The regular monthly meeting of this Society was held February 22d, at the office of Dr. G. Law, Greeley, with President *pro tem*. Hawes in the chair. The meeting was called to order at 9 p. m. Members present: Drs. Law, Hawes, Miller, Graham, Nelson and Kearns. Minutes of previous meeting were read and approved. The following officers were then elected for the ensuing year: President, Dr. J. F. Kearns, of Evans; Vice-president, Dr. C. W. Lovejoy, of New Windsor; Secretary and Treasurer, Dr. Norman W. Bellrose, of Eaton. The Treasurer's report for the year 1896 was read and accepted. It was then voted that the Society contribute \$50 toward defraying the expenses for the entertainment of the American Medical Association at their next meeting (1898) if said meeting shall be held in Denver. Dr. Jesse Hawes was then requested to communicate with Dr. Jayne, of Denver, concerning the matter.

Dr. J. K. Miller read an interesting paper. Subject: "The Physician and His Profession." It was freely discussed by all members present. Discussion was closed by Dr. Miller. Dr. Law was requested to prepare a paper for the next regular meeting.

On motion the Society adjourned to meet March 29th at Dr. Law's office. This Society was organized about a year ago, with a membership of twelve. Much interest has been manifested by all members, and some very interesting and instructive papers have been read before the Society. Meetings are held on the last Monday of each month.

NORMAN W. BELLROSE, *Secretary*.

Messrs. A. G. Spalding & Bros., of New York, offer \$85 in prizes to the physician writing for them the best half-page advertisement setting forth the good points of the Christy saddle. The competition closes April 15th.

News Items.

Dr. C. Elder, of this city, was in Washington, D. C., last month.

Dr. B. S. Galloway, of Leadville, paid Denver a business visit in February.

Dr. John Foster went up to Leadville on business combined with pleasure, last month.

Dr. F. E. Waxham attended to business affairs in Chicago for ten days, the first of March.

Dr. F. M. Collier, of Denver, has gone to southern California to recuperate for a month or so.

Dr. S. E. Solly, of Colorado Springs, one of our collaborators, was recently in Denver on a visit.

Dr. Spratlin, of this city, has been appointed one of the colored commissioners to represent Colorado at the Nashville exposition.

Dr. Herrick was in Las Vegas, N. M., in February, whither he went to bring home his son, Dr. Selden Herrick, who was there for tubercular trouble.

Dr. Munn presented his views to the City Improvement Society at one of their meetings on the conduct of the office of City Health Commissioner.

The month of April will find the various medical colleges in Denver, (excepting the State) closing up their year's work with commencement exercises, banquets, etc.

Dr. Henry Sewall's lecture before the Denver Improvement Society on "Healthy Homes and Village Improvement Societies," was attentively listened to by a large and interested audience at the Society's last meeting.

A few interested people appeared before the senate committee on state affairs and argued earnestly in favor of the Moody bill, which legalizes the practice of osteopathy, but at the present time the bill has not been heard of.

Dr. Ambler, one of the resident physicians of St. Luke's Hospital, has a very ably written article in this month's *Rocky Mountain Druggist* upon "Asepsis and Antisepsis—Latest Methods for Securing These Conditions in Well Equipped Hospitals."

The request to Judge Butler to compel Mr. Smith to furnish a cash bond in the case of Smith vs. Dr. W. W. Grant, was denied. If this just protection was given to defendants in malpractice suits, it would abort many cases of the "want damage fever."

The Breitenbach Co., of New York, is sending to the medical

profession a copy of a clause in their contract with Dr. Gude, of Leipzig, Germany, which prohibits their advertising pepto-mangan in other channels than medical journals. It is a clause that other manufacturers might well adopt.

Necessity is about to force the Arapahoe county commissioners into tearing down the much dilapidated wing of the County Hospital this spring, and building a new one, to cost \$40,000. This want has been so glaringly apparent for so long a time that comments are unnecessary.

Some sympathizer with poor, suffering humanity advocates in the public press the following remedy for insomnia: "Insomnia and overtaxed nerves vanish and are greatly soothed and refreshed by placing sliced raw onions in the sleeping room, preferably near one's pillow." We would suggest that in relieving the insomnia this might force one into somnambulism.

Some of the doctor friends of Dr. John Foster were bidden to one of his delightful dinner parties on Thursday evening, February 26th. Gathered around the festal board to enjoy the hospitality of the host were Drs. Galloway, of Leadville, Pershing, Wetherill, Packard, Herrick, McNaught, Fisk, Sewall, Perkins, McLauthlin, Worthington, Carlin, Whitney and Axtell, and Mr. Foster, brother of the host.

Dr. Galloway's true Leadville story is that while engaged in "a religious and scientific discussion," he was called to the telephone and asked to visit a lady patient of his whom he had on a tonic, but whom he had not seen for some time. He was anxious to stay and see what the other man held, so he answered that he could not come, but for the woman to take the same medicine he had given her before. The telephone answer took the doctor off his feet: "O Doctor, it's a different thing. She wants you here—she's going to be confined."

The malpractice fad is among us, the latest being a suit against Dr. F. H. McNaught, of this city, for an alleged malpractice on a crooked little finger. In line with this is another suit being brought against the directorate of the Homeopathic Hospital for an alleged malpractice employed in a gynecological case in that hospital. These malpractice suits seem apparently to be contagious, "the fever" being brought on by hearing or reading of some person's lawsuit of a similar nature and an irresistible desire overcomes the victim to try the same remedy himself. We are pleased to announce that Dr. McNaught was able to crook his finger at his opponent. The jury quickly acquitted him.

THE COLORADO MEDICAL JOURNAL.

SUCCESSOR TO

THE COLORADO CLIMATOLOGIST AND DENVER MEDICAL NEWS.

A Monthly Journal for the Medical Practitioners of Colorado and Adjoining States.

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VOL. III.

DENVER, COLO., MARCH, 1897.

No. 3

Editorial.

The American Medical Association.

The American Medical Association will meet in Philadelphia, Pa., June 1, 2, 3 and 4, 1897. The Colorado delegation promises to be a large one. That our State Society will tender them an invitation to meet in Denver in 1898 is now an assured fact. Over one-half of the amount needed for their proper entertainment has been subscribed by thirty-four members of the profession, and on every side is heard the desire to help. We must have the meeting. We will give the Association a "round-up" that will set the pace for many years. Let every Colorado physician that possibly can, arrange to go to the meeting this year and work like a beaver for Denver and the Association in 1898.

† † †

More Malpractice Suits.

The prediction made by some of the knowing ones that the suit against Dr. Grant was but a forerunner of other damage suits to be brought against other members of the medical profession of Denver has been verified. Dr. F. H. McNaught has fought and won the first of the fights with the advance guard of the blackmailing army. Suit has just been entered, according to the daily papers, against a number of well known and reputable homeopathsists

and the Homeopathic Hospital for \$25,000 damages on account of alleged malpractice. The facts of this case make it a particularly unjustifiable one, and go far to increase the belief among physicians that there is a deliberate intent on the part of certain persons to hunt up cases against doctors and get them into court in the hope that the case will be compromised. They may as well realize now as at any other time that the whole profession, or at least all the decent members of the profession, will stand by those doctors who are unfortunate enough to be assailed, regardless of differences of belief in regard to schools of practice.

As already stated the suit against Drs. Burg, Smythe and others is one which especially appeals to the intelligence and sympathy of every practitioner. As consultants they assisted at an operation which was only undertaken at the earnest solicitation of the patient and which, unfortunately, left a urinary fistula as a sequel. This they attempted, unsuccessfully, to repair. A very eminent regular surgeon has also failed in his attempts at repairing the fistula. Every one who has ever done any bladder surgery knows that it is beyond human power to always secure favorable results in the treatment of urinary fistulæ. And yet this patient, with the backing of some attorney, probably for a contingent fee, comes into court and claims damages.

If the court appreciates the real responsibility that it placed upon it, this case will never be allowed to go to a jury. In the very nature of things the men make up the average jury are not the peers of the physician and cannot give him a fair trial; they have no appreciation of the relative weight to be attached to the statements of the witnesses for the defense and for the prosecution. But the trial judge usually has a definite idea of the false character of the claims made and of the justice of the physician's defense. And when he has, it should be his duty to take the case from the jury. The judge should stand between the doctor and his malicious persecutors.

The weight that should be attached to the foregoing paragraph may be greater when I state that it is practically an excerpt from the decision of the supreme court of Pennsylvania in the now famous case of Dr. Willard, a prominent homeopathic surgeon of Pittsburgh, whose case was four times adversely decided in the lower courts, and as often reversed by the supreme court, which finally dismissed the case with the statement that no trial judge should ever have permitted it to go to the jury. The sympathy of the whole profession, regardless of sectarian belief, will undoubtedly be with Drs. Burg and Smythe and their confreres,

W. P. M.

THE COLORADO MEDICAL JOURNAL.

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FOUNDED BY DR. CHARLES S. MANLY, IN 1894.

VOL. III.

DENVER, COLO., APRIL, 1897.

NO. 4

Original Communications.

BACTERIOLOGICAL DIAGNOSIS IN TYPHOID FEVER. *

By WILLIAM C. MITCHELL, M. D.,
Denver, Colo.

*Lecturer on Bacteriology and Director of Bacteriological Laboratory, Medical
Department University of Denver.*

In 1880 Koch and Eberth, working independently of each other, discovered the bacillus of typhoid fever, but it was not until four years later that Gaffky succeeded in obtaining this bacillus in a pure culture, and thus acquainted the world with the life-history—the biology—of this important micro-organism.

The results of his original labors with typhoid fever, and which have since received confirmation from countless other observers, go to prove that from a bacteriological standpoint, typhoid fever is a very unsatisfactory disease and, in very truth, the bacteriological examination of a stool or a given water supply for the detection of the typhoid fever bacillus is a bacteriologist's *bête noir*.

The bacillus typhi abdominalis, while it is universally regarded by pathologists and bacteriologists as the specific etiological factor of typhoid fever, has never yet satisfactorily fulfilled the third postulate of Koch. As is well known, Koch established four laws or postulates which he considered necessary to be fulfilled before an organism could be regarded as being the causative agent of a disease. These postulates are as follows:

The micro-organism must be found in the blood, lymph or diseased tissue of man or animal suffering from or dead of the disease.

"The micro-organisms must be isolated from the blood, lymph or diseased tissues, and cultivated in a suitable medium, *i. e.*, out-

* Read before the Denver and Arapahoe Medical Society, March 9th, 1897.

side of the body. These pure cultures must be carried on through successive generations of the organism.

"A pure culture thus obtained must, when introduced into the body of a healthy animal, produce the disease in question.

"Lastly, in the body of the inoculated animal the same micro-organism must again be found."

The feeding of the lower animals, including the apes, with pure virulent cultures of the bacillus of typhoid fever has invariably given negative results*—results not at all surprising when one considers that the lower animals never spontaneously contract this disease. On the other hand, injections as practiced with this bacillus upon some of the lower animals, occasionally give positive results and the bacillus of typhoid may be found in the body of the afflicted animal, notably in the spleen.

But as unsatisfactory as is the relation of this bacillus to typhoid fever as exhibited by experiments upon the lower animals, its constant presence in the intestinal lesions and in the spleen of typhoid fever patients and the absence of other micro-organisms in these locations, together with the well established fact that the ingestion by man of food or drink containing this bacillus may result in typhoid fever, has been considered of sufficient evidence to place this micro-organism among those recognized as pathogenic.

It having been established, then, that this bacillus bore an etiological relation to the disease and, moreover, that it is constantly present in the intestines of those afflicted, the hope was immediately raised that, by the examination of the stools of a suspected case of typhoid, the diagnosis might be settled as promptly and as satisfactorily as is the case in the examination of the sputum of a suspected case of pulmonary tuberculosis.

This hope has never been realized and the obstructions in the way of its fulfilment are many. The first of these is that while the *bacillus typhi abdominalis* may be and, without doubt always is present in some portion of the intestinal tube during the progress of the disease, as was pointed out by Sternberg, it does not necessarily follow that it is in every evacuation. And again, to those familiar with bacteriological methods, it is quite apparent that even were it always present in the stool, it might easily be missed in the small amount of material which is taken for the purpose of bacteriological examination. Again, were this bacillus present in every evacuation during the course of the sickness, it does not possess a morphology distinctive enough to differentiate it from some other spe-

* When artificial conditions are produced, as allaying intestinal peristalsis by the injection of audanum in the peritoneal cavity and the neutralization of the gastric juice, Levy, Klemperer and others found that at times a condition resembling typhoid fever was produced in animals.

cies which are constantly present in the human feces, the most prominent of which is the *bacillus coli communis*, and hence its identity can only be established by various culture methods and by a comparatively elaborate investigation of its chemical and physiological phenomena. Not unfrequently before a decisive answer can be given by these methods, the pathologist has been called in at the autopsy to settle the question of diagnosis.

Were we fortunate enough to find in this bacillus a species which exhibited some peculiarity in its ability to reject or retain the anilin dyes, as is the case with the bacillus of tubercle, the matter of identification would be comparatively simple, but such is not the case, and for its positive identification, we must investigate certain of its biological phenomena.

In view of these difficulties in the way of a speedy and easy recognition of the typhoid bacillus, an object of such paramount importance in establishing an early diagnosis in this oftentimes erratic disease, numerous investigators have sought to ascertain if this particular bacillus exhibited an elective growth in any particular medium, *i. e.*, if the bacillus of typhoid, together with whatever other bacteria happened to be present in the material under investigation—a suspected water supply, or a stool—were planted in a given medium, all the other micro-organisms present with the exception of the *bacillus typhi abdominalis* would be incapable of development and thus leave the typhoid organism master of the field. To this end, one after the other of the ordinary culture media have been used, and to them has been added a long list of chemicals in the hope that at length some substance might be found that would inhibit all the other micro-organism present with the exception of the bacillus of typhoid.

Such combinations have proven to be satisfactory in but a small degree. Parietti's test is a well known method worked out on these lines. In a few words it is as follows: A few drops of a weak solution of carbolic acid, hydrochloric acid and water are added to neutral bouillon. Later a small quantity of the suspected stool or water is added to this mixture, and the tube is placed in the incubator for development at 37 degrees C., the combination of acids present being supposed to admit only of the development of the bacillus of typhoid.

Holtz's method for isolating the typhoid bacillus is based on the observation that this micro-organism assumes a distinctive characteristic growth when cultivated on potatoes, and he prepared a medium combining the essential features of the potato with gelatin and thus obtained a solid transparent medium.

By these and all similar methods of cultivation, it has been discovered that the process of "sifting out" while it either kills or inhibits many of the micro-organisms present, nevertheless allows many other bacteria to develop besides the typhoid bacillus and, indeed, in some cases, other species have proved to be more hardy than the *bacillus typhi abdominalis* and have developed while it has remained inhibited.

In the latter part of 1895, Elsner* published a method for the elective growth of the typhoid bacillus, which in his hands gave most excellent results. His medium consisted of a modification of Holtz's potato-gelatin to which was added one per cent. of iodide of potassium. He found that practically the only bacteria which would develop in this mixture were the *bacillus coli communis* and the *bacillus typhi abdominalis*. Hence, if a suspected stool were subjected to this test, these two species could be readily isolated from all other species present and differentiated from each other. In such a medium, the *bacillus coli communis* assumed a comparatively full and luxuriant development at the expiration of 24 hours, while at the expiration of this period of time, the colonies of the typhoid organisms were hardly visible, but after 48 hours appeared as diminutive globular colonies of granular consistency.

My own experience with this method has been too limited to express a positive opinion, but the method does not seem to have been of practical utility in establishing the disease and, moreover, certain French authorities claim to have isolated the *bacillus typhi abdominalis* by this method from the stools of patients not suffering from typhoid fever.

It should be mentioned in passing that no method has ever yet been devised by which when both of these organisms, the colon bacillus and the typhoid bacillus, are present in the material to be examined, the bacillus of typhoid may be caused to develop while the colon bacillus will be unable to grow. In fact, as before mentioned, the *bacillus coli communis* is the more vigorous and virile of the two, and will frequently develop where the typhoid bacillus will not.

In morphology and in the ordinary cultural methods, these two organisms cannot be distinguished from one another, and it is readily understood how the colon bacillus complicates the question of identification: Escherich has demonstrated that the meconium of an infant just delivered is absolutely free from bacteria; after a period of time varying from 12 to 18 hours, micro-organisms make their appearance, at first yeast cells and micrococci which, no doubt, fall from the air upon the lips and into the mouth and are swal-

* Zeitschrift für Hygiene.

lowed with what little salivary secretion is present and with the milk. Later, when milk feces are formed, the *bacillus coli communis* makes its appearance and, as is well known, remains a constant inhabitant of the intestines during the life of the individual. This micro-organism, present in health, is also present in disease, and it and its near congener, the *bacillus typhi abdominalis*, may be differentiated from each other by the following biological characteristics:

1. The cultivation of the typhoid bacillus on potatoes gives the characteristic invisible growth—a growth represented by a colorless, sticky vegetation, while on this medium the colon bacillus always gives a visible luxuriant growth. In this test one-half each of the same potato should be used in the cultivation, as different potatoes give a different reaction. Unfortunately, the invisible growth of the typhoid organism on potatoes is not constant, as it sometimes gives a visible growth, especially if the reaction of the potato is alkaline.

2. The typhoid bacillus is unable to cause fermentation when inoculated into a medium containing glucose, lactose or saccharose, while the colon bacillus causes marked fermentation with the liberation of gas in such media.

3. Although milk affords a very suitable medium for the growth of the typhoid organism, it causes neither an acid reaction nor a coagulation of the casein. The *bacillus coli communis* causes both of these changes.

4. Indol is not produced by the typhoid bacillus when it is cultivated in a peptone solution, while the colon bacillus causes such a production.

5. In media (gelatine or agar-agar) to which litmus tincture and lactose have been added, the vicinity of the medium surrounding the colony is not changed in color, while in the case of the colon bacillus the surrounding area is reddened.

6. It is also worthy of note that the typhoid bacillus is more actively motile and possesses a greater number of flagella than the *bacillus coli communis*.

While none of the above characteristics, if taken alone, would suffice to identify the typhoid bacillus, yet taken in the aggregate they establish its identity without all peradventure.

It will thus be seen how extremely difficult and oftentimes uncertain the diagnosis of typhoid fever becomes when in a given case it is necessary to detect and indentify the typhoid bacillus.

In June of last year, Widal*, whose name has for some time past been associated with researches on the bacillus of typhoid, an-

* La Presse Medicale, July 29, 1896.

nounced before the *Societe Medicale des Hopitaux de Paris* a new method for the diagnosing of typhoid fever bacteriologically and, indeed, a method that differed very widely from all of its predecessors. In short, his claim was that the blood serum from a patient afflicted with typhoid fever possessed the power to inhibit the active motility of the typhoid fever bacillus, and cause it to bunch together in clumps or agglutinations, and that this reaction occurred early enough in the disease to be useful as a means of diagnosis.

It was not a new fact that Widal was introducing, but only the happy application of an already well known fact to diagnosis.

Charrin and Roger* found that if the bacillus pyocyaneus was cultivated in the serum of an animal immune against this bacillus, the culture fell to the bottom of the tube in flakes and left a clear supernatant liquid.

Metchnikoff† ascertained that the *vibrio metchnikovi* lost its motility and formed clumps when cultivated in the serum of a guinea-pig immune against this micro-organism.

Pfeiffer‡ was the first to show that the blood serum of animals immunized against cholera possessed a specific bactericidal power against the spirillum of cholera, while towards all micro-organisms such serum comported itself in nowise different from normal serum. For example, if the blood serum of an animal immunized against cholera was injected into the peritoneal cavity of a guinea-pig simultaneously with a culture of the spirillum of Asiatic cholera, the serum protected the animal against the ravages of the spirilla. Pfeiffer taught that this result was not due to the serum *per se*, but that it possessed the power of causing certain changes in the exudate in the body of the animal into which it was introduced, which brought about an agglutination and disintegration of the cholera spirilla. This reaction could also be obtained *in vitro* when the serum had previously been allowed to rest in the peritoneal cavity of a healthy animal. Later the same phenomenon were shown by Pfeiffer and Kolle* to occur with reference to typhoid fever serum and the bacillus typhoid.

These two authors and also Gruber proposed that this reaction might in some way be utilized in diagnosing this disease, but the credit of introducing the agglutination reaction as a clinical means of diagnosing typhoid fever belong to F. Widal.

Widal originally announced two methods for obtaining this reaction. According to the first method, several drops of blood were

* Compt. rend. Soc. de Biologie, Nov., 1889.

† Annales de l'Institut Pasteur, Tome V., p. 473, 1891. Cited from the *Edinburg Medical Journal*, January, 1897.

‡ Zeitschrift für Hygiene, B. XVIII, 1894.

* Deutsche Medicinische Wochenschrift, Nos 11 and 12, 1896.

obtained from a puncture in the finger-tip, and collected in a sterile glass vessel. After the blood had coagulated, one drop of the serum was mixed with 10 drops of a 24-hour old bouillon culture of the typhoid bacillus and examined in the hanging drop under the microscope. If the case was one of typhoid fever the bacilli, which naturally are actively motile, lost their motility and became bunched or grouped together†. It took from a few minutes to several hours before this reaction was completed. By the second method, this agglutination reaction was to proceed on a larger scale. Several cubic centimeters of blood were taken from the median vein by means of a sterile hypodermic syringe. When the serum had separated, eight drops of this fluid were added to four c.c. of a fresh bouillon culture of the typhoid organism, and this mixture was placed in the incubator at 37 degrees C. If the case from which the serum had been taken was one of typhoid fever, after from 8 to 12 hours the cloudy culture exhibited a flocculent sediment in the bottom of the tube and small agglutinated bunches along its sides. After 24 hours incubation, growth of the bacilli may again set in as the few drops of serum are no longer able to hold in check the growing bacteria.

This latter means of diagnosis seems to have been too heroic to have met with general approval, although it has been adopted in several cases. Breuer* examined 43 cases of undoubted typhoid fever and found that the reaction was "positive and unequivocal" in every case. In 27 cases of fever not typhoid, 22 cases were equally unequivocally negative. The remaining five cases showed a slight agglutination and in three of these cases (acute febrile conditions) the author is still in doubt of the diagnosis.

On the other hand, the microscopical test has met with a widespread popularity and investigations are reported from all parts of Europe and America. These reports are practically unanimous as to the great efficacy of this means of diagnosis in typhoid fever.

In America, Dr. Wyatt Johnston† gave a great impetus to this test by his modification of Widal's method so as to allow of its easy introduction by health departments. His modification, as is well known, consists in allowing a drop of the blood to dry on a sterile cover slip or a piece of non-absorbent paper or card board. The specimen can thus be readily mailed from a distance to the municipal laboratory, where the dried blood is to be dissolved with sterilized distilled water, mixed with a fresh culture of the typhoid bacillus and examined.

† The term "agglutination" was introduced by Gruber.

* Berliner Klinische Wochenschrift, Nos. 47 and 48, 1896.

† New York Medical Journal, October, 1896.

This author‡, in conjunction with Dr. McTaggart, examined by this method 143 cases represented as genuine typhoid. In 118 cases the reaction was positive at the first examination, and five cases which were doubtful on first examination proved positive at the second examination. Negative results were obtained in 20 cases, and 14 of these proved to be not typhoid by their subsequent history. The positive cases give the high percentage of 95 in which the test was successful.

A gratuitous public service for such examinations has been in operation since last September at the laboratories of the health board for the province of Quebec. Such a service was also established by the board of health of the city of New York in October, 1896.

Haedke* examined 22 cases of undoubted typhoid and 20 cases of sickness other than typhoid by the major method and he sums up his results as follows: "No cases of typhoid gave a negative reaction and none of the other cases gave a positive reaction." He also examined a number of these cases (number not given) by the microscopical test and his conclusions were that while this method was not so unequivocal and absolute as the major test, yet it gave satisfactory results.

Fraenkelf in the number following this communication in the *Deutsche medicinische Wochenschrift* presents what seems to me to be one of the most valuable contributions yet made on this subject. He ascertained that from a puncture made in the finger, sufficient blood could be obtained to allow of its being subjected to both the major and minor tests. In from five to 10 minutes he was thus enabled to obtain from one to 1.5 ccm. of blood. This was caught in a sterile test tube placed in a slanting position so that when the blood coagulated the serum would collect at the bottom of the tube free from the clot. In a few hours at room temperature more than one-half cc. of serum might thus be obtained. In carrying out the major method he recommends the use of the narrow tubes having but a diameter of from seven to eight mm. In such tubes one to 1.5 ccm. of bouillon will rise to a height of from 1.5 to 2 cm. For the reaction in such a tube, from one to two drops of the serum are abundantly sufficient and this quantity may be brought into the bouillon by means of a large platinum loop. A drop of the serum

‡ British Medical Journal, December 5, 1896.

Since the above 143 cases were reported, a more recent article by these authors states the number of cases examined up to date to be 500.

* Deutsche medicinische Wochenschrift, No. 2, 1897.

† Deutsche medicinische Wochenschrift, No. -, 1897.

is also to be mixed with a bouillon culture and examined under the microscope.

Fraenkel examined 11 cases afflicted with and 18 cases convalescent from typhoid, and obtained positive results in every case excepting two out of the 18 convalescents. The 16 convalescents with positive results were examined between the fourth day and the seventh week of their convalescence. The two cases with the negative reaction were in third and fifth weeks respectively.

Since the publication of Fraenkel's article, Cabot† also states that he uses small test tubes and obtains 20 drops of blood by puncture of the finger or the ear. He examined 71 cases of typhoid and obtained a typical reaction in 70 cases.

Biggs and Parke* examined 140 cases "fully believed to be typhoid" and obtained 100 positive and 40 negative reactions. Of 57 cases "fully believed not to be typhoid" every case gave a negative reaction. These authors, in a part of the conclusions of their valuable work on this subject, state: "It seems probable, therefore, that a positive diagnosis may be reached in 50 per cent. of the cases of typhoid fever, and a probable diagnosis in half of the remaining cases by estimating the amount of the agglutinating substance in the blood.

This estimate is noticeably lower than that given by many other observers.

One of the cases reported by the two authors just mentioned is of especial interest. The patient presented undoubted typhoid, but the reaction was never marked even with a dilution of one part of the serum to four of the typhoid culture. Ten days after the temperature had subsided to normal a relapse occurred. The typhoid bacilli were obtained from the spleen by puncture on the 24th day. On the second day of the relapse the reaction was marked with one part of the serum to 15 parts of the culture.

Not to multiply cases, it may be stated that Dr. A. R. Guerard, assistant bacteriologist of the New York health department, has tabulated a list of 422 cases of typhoid or suspected typhoid examined by the serum method by different observers. Of this number 95 per cent. of the cases were correctly diagnosticated either positively or negatively by this test.

From the scarcity of cases at this time in the city of Denver, it was an inopportune time to have tried the test, yet I have succeeded in applying it to eight cases which were either undoubted typhoid fever or suspected of being the same.

† Boston Medical and Surgical Journal, February 4, 1897.

* American Journal of the Medical Sciences, March, 1897.

CASE 1. Dr. Whitney's.	History. Patient female, age not given had diarrhea, rose spots, delirium, tympanitis, and typical typhoid temperature.	Examination on January 5th, (10th day of fever) by Widal's method.	Reaction. Agglutination set in after a few minutes leaving the field covered with small islands of bacilli and clear intra-insular spaces. A few bacilli remained motile until five hours. In the control the bacilli were actively motile after 24 hours.
CASE 2. Dr. Sewall's.	History. Patient female, single, aged 26, had abdom. tenderness and gurgling. Temperature 100.5. A few susp., but not characteristic spots on abdomen. Spleen negative. Temperature fell to normal in a few days, and the case which formally had been thought to have been typhoid fever was then thought to be "auto-intoxication." As, however, the diagnosis of typhoid was still a serious possibility the serum test was applied.	Examination on January 8th (—th day of fever) by Widal's method.	Reaction. Negative. No agglutination after 24 hours. Future development bore out the diagnosis of auto-intoxication.
CASE 3. Dr. Fisk's.	History. Patient female, age— had had prodromal symptoms for several days. Later developed an irregular non-characteristic temperature with tympanitis, but no iliac tenderness. Three days after the serum test showed the case to be one of typhoid fever the patient developed rose spots and otherwise showed itself to be undoubted typhoid fever.	Examination on January 6th, (6th day of fever) by Widal's method.	Reaction. Agglutinated bunches observed as soon as the drop was brought in focus. A few organisms remained motile as late as six hours. Control was actively motile after twenty-four hours.
CASE 4. Dr. Liebhardt's.	History. Patient female, aged —, had prodromes of headache, malaise, etc., for several days, and later developed a typical typhoid temperature on which the diagnosis was based. Rose spots, marked general tenderness of the bowels and moderate tympanitis appeared four days after the serum test had confirmed the diagnosis already made by Dr. Liebhardt.	Examination on January 13th (9th day of fever) by Widal's method.	Reaction. Agglutination was early and marked. No motility after one-half hour. Control negative.
CASE 5. Dr. Bonney's.	History. Boy, aged 10 years. Relapse of typhoid fever.	Examination on January 18th (—th day of fever) by Widal's method.	Reaction. But slight reaction. Very few clumps observable. There was a marked and active motility which did not cease until twelve hours. Control negative.
CASE 6. Dr. Sewall's.	History. Patient female, married, aged 32, came to Dr. Sewall's service, St. Luke's Hospital, with history of having been treated for the past three weeks for typhoid fever. Also a history of having had syphilis six months previously. Patient showed mild delirium and on account of her history it was necessary to confirm or exclude the diagnosis of typhoid.	Examination on January 19th (—th day of fever) by Widal's method.	Reaction. Negative. The specimen exhibited as actively motility after 24 hours as did the control of normal blood.
CASE 7. Dr. A. A. DeLoffre's (Kindness of Dr. Sewall.)	History. Patient male, aged —, had passed through typhoid fever and was convalescent.	Examination on January 26th (patient 10 days convalescent) by Johnston's modification.	Reaction. Positive. No motility to be observed after fifteen minutes. Control negative.
CASE 8. Dr. Fisk's.	History. Patient female, married, aged 30. Afflicted with pulmonary tuberculosis. Present illness commenced with headache malaise and insomnia. Tongue very characteristic of typhoid. Patient developed tenderness and gurgling in right iliac fossa, no diarrhea. The temperature chart exhibits beautifully a typical typhoid temperature. Diagnosis while doubtful was strongly susp. of typhoid.	Examination on February 1st (—th day of fever) by Widal's method.	Reaction. Negative.

This small number of cases thus gives five positive and three negative results obtained by this test.

Nos. 3 and 6 of this small series emphasizes particularly its value. In case No. 3 it will be noticed that the reaction was positive before the clinical signs or symptoms warranted such an assertion and that the subsequent development of the case bore out the serum diagnosis.

In case No. 6, although there was a history of syphilis, yet the irregular fever, the delirium, and the previous diagnosis of typhoid fever made it necessary to exclude this disorder. The serum test was absolutely negative; the preparation exhibited as lively and active motility after 24 hours as did the control of healthy blood. Dr. Eskridge was called in as consultant and found double optic neuritis and symptoms of brain tumor, and the further development of the case has shown it to be one of cerebral syphilis.

Out of the eight cases examined by this method the serum test and the clinical history agreed in seven cases. In the one remaining case, the serum test was negative, while the clinical diagnosis, although doubtful, pointed strongly to typhoid fever.

As to technique, the parent culture of the stock I used came originally from the Hygienic Laboratory of the University of Michigan. In every case except the first and the seventh, the dilution was one part of the serum of a 24-hour old bouillon culture of the typhoid bacillus which had been cultivated in the incubator at 37 degrees C. A drop of this mixture was placed on a cover slip and examined as a hanging drop. In the first case, the dilution was one to five, and the seventh case, the blood of which was sent through the mail on a sterile cover slip, was examined according to Johnston's modification.

The exact time at which the power to cause this reaction makes its appearance in the blood of typhoid fever patients has not been settled. It is usually present on the sixth day, but it seems to vary in different cases, appearing earlier in some and later in others.

Widal lays particular stress upon the fact that while this reaction may disappear after convalescence has set in, yet on the other hand it may be demonstrable for months or even years after the attack. It is his opinion that the reaction is not one of immunity, but one of infection, *reaction d'infection*, and in this view he is supported by Breuer, Fraenkel and others.

In conclusion, it must be mentioned that while the grand majority of testimony is as to the great utility of this means of diagnosis, yet instances have been reported which show that the test is not

absolute. Gruenbaum* obtained a marked reaction in one case of jaundice, and Block†, of the Johns Hopkins Hospital, obtained a partial reaction in a case of diabetic coma and also in a case of pernicious comatose malaria. Neither of these cases gave a history of having had typhoid fever previously.

It is evident that many discrepancies will appear in the results of different observers using so delicate a test, nor will these differences be obviated until a uniform technique is evolved settling the question as to the virulence of the culture to be used, the exact degree of dilution of the serum, etc.

As it is, while a negative reaction does not absolutely exclude typhoid fever, yet a positive reaction obtained by this method seems to approach the nearest being "pathognomonic" of any of the various test yet invented for typhoid fever. Moreover, as Fraenkel justly remarked, this reaction of the serum of a typhoid infected individual is not only of value in establishing the diagnosis of typhoid fever, but it clearly proves the etiological relation of the bacillus to the disease, a fact which there are yet, unfortunately, many skeptical enough to disbelieve.

* Lancet, September 19, 1896.

† Johns Hopkins Hospital Bulletin, Nos. 68 and 69, 1896.

COMPLETE BLINDNESS FROM BILATERAL PRESSURE ON THE OPTIC RADIATION, PROBABLY DUE TO HEMORRHAGE *

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The case which I shall endeavor herein to present, embraces some rare features and, to me, has been an interesting study in localized cerebral disease. In a somewhat extended search through all available literature, I have failed to find a parallel case.

Elbe C., a robust male child of two years of age, the very picture of health, whose previous health had always been good, with no tubercular or syphilitic history in the parents, while at play early on the afternoon of November 13, 1896, fell, striking his head against the ground, causing him to cry and complain for a short time. But little attention was paid to the accident by the parents, as they could find no bruises or external signs of injury, and the boy soon went about his play again. About 4 p. m., when he came in, his mother noticed occasional twitching and trembling of the muscles of the arms and legs. He played on, however, until supper time, ate a hearty supper and was put to bed.

* Read at the April meeting of the Pueblo County Medical Society.

At 7 p. m. the trembling came on again and was soon followed by a general convulsion which lasted two or three minutes. This was rapidly followed by another, during which I was sent for, and living only a short distance away, I arrived at the house just as he was entering into his third attack, a few minutes after 7 o'clock. When this one ceased he vomited freely, and seemed to eject the entire contents of the stomach. He could at this time swallow and was given a dose of castor oil and five grains of bromide of sodium. The convulsions soon returned and continued, notwithstanding all efforts to check them, at intervals of from fifteen minutes to three-quarters of an hour each, until 5 p. m. of the next day, being about 22 hours.

At first the spasms were general, but toward the last they became confined to the right side and affected the muscles of the arm and trunk, more than of the leg. The temperature soon arose upon the cessation of the convulsions, and during the illness that followed, ran from 101° to 106° F. He became unconscious at the beginning of the first convulsion, and each convulsive attack ended in greater drowsiness.

After the spasms ceased, the vital powers were left greatly exhausted, Pulse irregular and very feeble; respiration weak; pupils contracted; and the muscles of the cervical region and jaws were in a state of tonic contraction. Profound drowsiness, from which he could not be aroused, supervened and it was impossible now to get him to swallow. The eyelids were wide open and the extremities cold.

During the next few hours his condition rapidly grew worse, until the child's life seemed to hang by a thread. About the third day he rallied a little and took some milk, but soon sank again into a condition of complete coma, with stertorous respiration. The pupils became widely dilated; a heavy white fur was on the tongue; the pulse was weak and irregular; and the respiration contained pauses of several seconds, during which the child ceased to breathe.

This condition continued with every evidence of imminent dissolution, until about the seventh day of his illness, when to our great surprise he began to show symptoms of returning consciousness, and in a little while swallowed some milk and gave unmistakable evidence of improvement.

For a few days he seemed mentally dazed, and it was hard to attract his attention, but this soon cleared up and he improved rapidly. As soon as he had recovered sufficiently to begin to take notice of things, it was discovered that the child was blind. No par-

alysis or paresis of any muscle nor impairment of any other of the special senses remained.

In three or four weeks after his illness he was as well and as hearty as ever, but there was no improvement in his vision. The movements of the ocular muscles were perfect. Hearing, taste and smell perfect. Pupils reacted readily to light and the tongue protruded in the median line. No ataxia of gait, or of any muscular action, has ever existed. The knee jerks are normal; no ankle clonus; urinary analysis negative.

The ophthalmoscopic examination was very imperfectly obtained, as this is no easy matter in a fretful, restless child of two, but enough was ascertained to determine that no extensive optic neuritis existed. A slight hyperæmia of the optic papilla was the only ocular evidence of intracranial pressure or congestion.

Soon after the patient's recovery from the acute illness he was put on the absorptive treatment, with a view to relieving the cerebral pressure, which was deemed the cause of the blindness. This was followed up faithfully and persistently for six weeks, but with no apparent improvement. About the time all hope was abandoned of any benefit from medication, and an exploratory trephining was being seriously considered, seven weeks having elapsed, his father came in one day, and said: "I think the boy can see a little." In a few days all doubt was removed, as he could name such objects as a hat, book, apple, etc., when held up before him.

There is little doubt now but that his vision will continue to improve, and will be restored to a great degree, if not completely.

In my study of this case, two points have constantly presented themselves for consideration: 1. What is the lesion that we have been dealing with? 2. Where is it located?

Regarding the first point we have to consider two conditions that might reasonably account for the symptoms above recorded. *First*, an acute meningitis from the injury to the brain, or meninges from the fall resulting in a rapid and extensive effusion of serum, giving rise to the extreme pressure symptoms—absorption not being complete; or, possibly, the exudate breaking down and a formation of pus remaining, giving rise by pressure to the visual paralysis.

That visual disturbance such as optic neuritis, hemianopsia, etc., may follow, as a sequel of meningitis, we have abundant evidence; but that blindness ever does, the literature seems rather barren. West, in his "Diseases of Infancy and Childhood," has recorded a case of blindness following an attack resembling tubercular meningitis. J. Lewis Smith simply makes mention of a case of perman-

ent blindness following sporadic meningitis, without giving any detail of the history.

Second, a slow traumatic hemorrhage, due to laceration of the brain at the time of the fall, with a rupture of some arterial twig which subsequently set up the meningitis with its attendant train of symptoms. The effused serum as the result of the inflammatory process being promptly absorbed, but the clot remaining, and from its pressure, inhibiting the visual function.

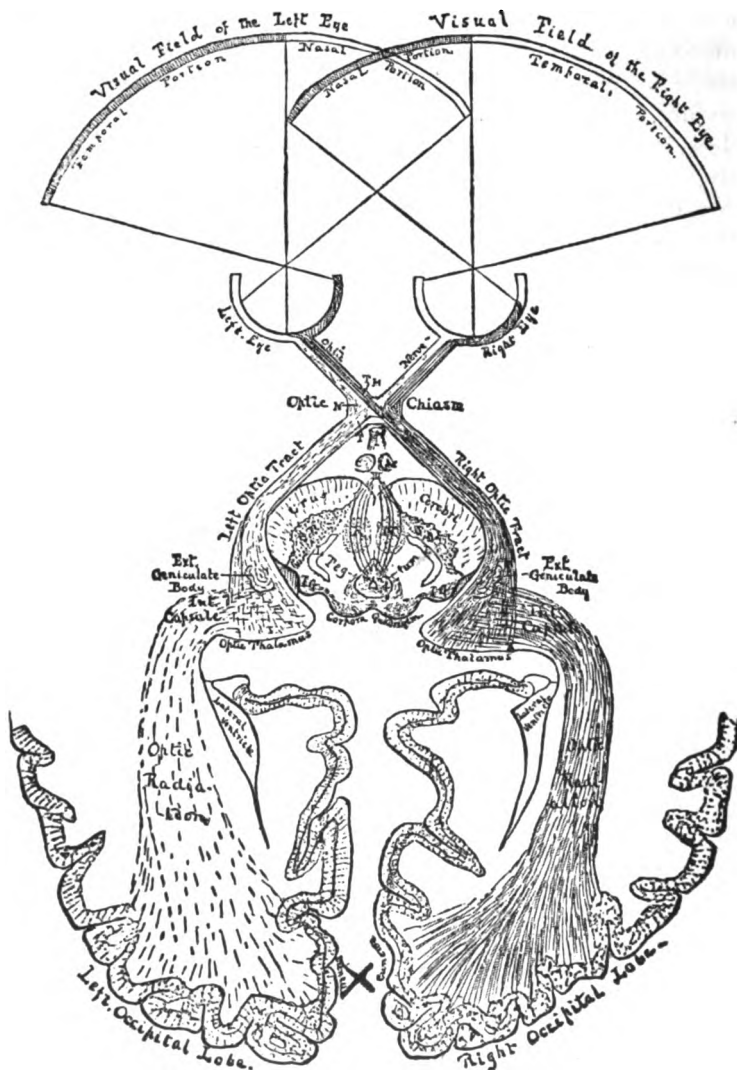
Now, is there anything at the time of the attack, or subsequently, by which we can recognize whether the pressure on the brain results from a clot or from a serous effusion? Da Costa, in regard to this point informs us that an effusion of serum is with great difficulty distinguished from hemorrhage, and that the actual signs may be the same, and that we never can be quite certain of the non-existence of a clot.

However, in the case under consideration, there are one or two notable points that turn the balance in favor of hemorrhage. An interval of consciousness of several hours duration between the accident and the appearance of any symptoms is indicative of hemorrhage. This is due to the fact that a certain interval of time must elapse before the quantity of blood which escapes from a rupture in one of the smaller branches is sufficient to produce unconsciousness from pressure. And, the persistence of the paralysis of the visual center also points to hemorrhage. In very rare instances do we find paralysis remaining as a sequence of an unabsorbed serous effusion, but it almost invariably in some form follows hemorrhage. These significant facts, taken in conjunction with the symptoms in evidence, we consider, are sufficient grounds for pronouncing the initial lesion to have been most probably a hemorrhage.

As to the second question—where is the lesion located?—we can speak with more certainty than as to the cause of the cerebral pressure, as cerebral localization is now being brought down by modern investigation to more nearly mathematical precision than any other department in medical science.

Without presuming to enter more than very superficially into the study of localization, or differential diagnosis, as to the seat of the lesion in the case under consideration, but by using the anatomy and physiology of the cerebral structures involved as search lights, the lesion may be located with a fair degree of accuracy. Accepting the evidence as conclusive that the lesion causing the blindness must be in the brain, we find by a study of the optic nerve tract and visual center, as illustrated in the drawing (Fig.), that blindness may be caused by or follow: 1. Affections of both

optic nerves simultaneously. 2. Bilateral lesions of the optic tract between the chiasm and the geniculate bodies. 3. Extensive pressure from fluid or destructive lesion at the optic chiasma, sufficient to destroy the function of both the direct and decussating fibers.



4. Disease of the apical region of both occipital lobes, and especially of the cuneus which is the cortical center of vision.

With these facts as guide posts, we have to distinguish whether the pressure in this case, is on the optic nerve, at the chiasma along the tract anterior to the geniculate bodies or in the cuneii.

Are there any symptoms in this case that are of any special localizing value? Yes. One that is of the most significant value. The pupillary reaction to light. By the application of what is known as Wernicke's Hæmeopic pupil inaction test, we can exclude without further consideration all lesions anterior to the geniculate bodies, viz, affections of the optic nerve, affections of the chiasma and bilateral affections of the tract, inasmuch as the pupil reflex, and consequent response to light, which we find exists in this case, depends upon the integrity of the retina, the fibers of the optic nerve and tract, and the nerve center in the geniculate bodies. Before the iris can respond to light, the impulse must be transmitted from the retina or receiving membrane to the fibres of the optic nerve and tract, thence to the nerve center of the iris—which resides in the geniculate bodies—which receives the impression and transmits the motor impulse along the third nerve to the iris, and the pupil contracts.

Therefore we conclude that these structures in our patient must be unimpaired, and that the lesion must be posterior to the geniculate bodies, in the vicinity of the origin of the optic radiations or the pupil reflex would have been abolished. This, then, will be the diagnosis of the location of the lesion, if by placing it there the sight symptoms can be made to harmonize with our diagnosis of hemorrhage as the cause of the trouble.

Hemorrhage, tumors and softening of the occipital lobe and the cuneus have been frequently met with and hemianopsia results.

Gowers tells us in his "Diseases of the Nervous System," that numerous observations have established beyond question that hemianopsia results from disease of the occipital lobe, and that bilateral disease causes complete loss of sight.

That there was a double hemorrhage situated identically the same in each occipital lobe is most improbable, but that there was a hemorrhage from the fall, with the formation of a clot between the cunei pressing bilaterally on the origin of the optic radiations, is quite probable. And, by placing it there, all the symptoms can be accounted for, both anatomically and physiologically.

In conclusion I want to add that the views herein advanced and the conclusions reached in the study of this case, are not put forward dogmatically and as infallible, but I realize that they are vulnerable at many points and necessarily somewhat hypothetical inasmuch as the surgical interference, which would have verified the diagnosis, was rendered unnecessary by the patient's improvement in vision.

MILK AS A FOOD, THE FERMENTATIONS TO WHICH IT IS LIABLE AND THE VALUE OF PASTEURIZATION.

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[Continued from last month.]

But there is a more serious side to the question. It has been recognized that bacteria are the cause of many of the most fatal diseases, and that the bacteria which produce such diseases as typhoid fever, diphtheria, tuberculosis, scarlet fever, etc., thrive in milk as a culture medium and numerous epidemics of those diseases have been traced to the dissemination of the germs of these diseases in contaminated milk.¹ Some of these may be transmitted directly from the diseased cow to the milk, some are due to the accidental contamination of healthy milk with disease germs.

It has been recognized that cows sometimes suffer from diphtheria and when the milk glands are affected with this disease the germs gain access to the milk and so may serve to spread the disease. Several observers have also given us reason to believe that the same is true as regards scarlet fever, and instances have been given where epidemics of scarlet fever have been traced to such a source. Most important of all, however, is the fact, now almost universally admitted, that the milk of tuberculous cattle in certain stages of the disease may be contaminated with the germs of tuberculosis and the great prevalence of tuberculosis among certain breeds of cattle makes this source of contamination of the greatest importance.

Dr. H. C. Ernst made examinations of 114 samples of milk from 36 cows, all of which presented more or less distinct signs of tuberculosis of the lungs or elsewhere, but none of which had marked signs of disease of the udder of any kind. Of these samples the bacilli of tuberculosis were found in 17; *i. e.*, the actual virus was found in nearly 15% of the samples of milk examined. These 17 samples came from 10 different cows, showing a per cent. of detected infectiousness of 27.8%. Cream is quite likely to be as infectious as milk. Inoculation experiments made with rabbits and guinea-pigs showed the milk of seven cows out of the 14 to be infectious. Calves fed on this milk showed infection in five out of 12 cases, and in pigs two out of five cases. Dr. Ernst concluded: (1). Emphatically that the milk from the cows affected with tuberculosis in any part of the body may contain the virus

1. In the *Medical Record* for March 28, 1896, p. 433, Dr. R. G. Freeman tabulates 53 epidemics of typhoid fever attributed to milk, 26 of scarlatina, 11 of diphtheria, 2 of foot and mouth disease, 3 of throat affection, 2 of acute poisoning by milk and one of Asiatic cholera—all occurring since 1880. In the Transactions of the International Medical Congress for 1881, IV, p. 491, Earnest Hart reports fifty epidemics of typhoid fever due to contaminated milk, occurring previous to 1880.

of the disease. (2). That the virus is present whether there is disease of the udder or not. (3). That there is no ground for the assertion that there must be a lesion of the udder before the milk can contain the infection of tuberculosis. (4). That, on the contrary, the bacilli of tuberculosis are present and active in a very large proportion of cases in the milk of cows affected with tuberculosis, but with no discoverable lesion of the udder.

In addition to instances where milk from diseased cows may serve as a means of spreading disease, milk from purely healthy cattle may also be contaminated with disease germs after being drawn from the milk gland. Of all diseases which may in this way be spread by milk typhoid fever is by far the most important. We have no reason for thinking that the typhoid fever germ can come from the cow, but a multitude of cases are on record where this disease germ has entered milk from impure water used in washing the utensils or milker's hands; or where the cows have access to open drains or sewers which may contain these germs, so rendering it possible for these germs to adhere to the body of the cow and then obtain entrance to the milk. Most numerous of all, however, in spreading the disease, are cases in which persons who handle the milk are either themselves affected by this disease, or who have helped to nurse typhoid fever patients. Most communities have laws which prohibit such criminal procedures, but few enforce even the most rudimentary hygienic precautions.

But even if none of these specific germs are present in milk, the myriads of bacteria which we know are always present are not to be consumed in our food with impunity. Perhaps many of them are harmless to the healthy adult, but this is not true for invalids or infants. The existence of cholera infantum among bottle-fed infants, a disease so prevalent and fatal in our large cities in the hot summer months, when the conditions are most favorable for bacterial growth, has been traced to the micro-organisms in milk.

Summer diarrhoeas in infants are nearly always due to toxicogenic bacteria. These germs multiply only at a temperature above 60° F., and for their development there is no better culture medium than milk both before and after it is taken into the alimentary canal. They elaborate chemical poisons which differ in their nature and effects according to the nature of the bacteria to which they are due. All are gastro intestinal irritants. The best known of these is tyrotoxicon, first found in poisonous cheese, later in ice cream and other milk products, and it has also been isolated in milk. Dr. Vaughan has isolated and studied proteid poisons from cultures of the toxicogenic germs found in the intestines of infants suffering from milk infection, all of which were highly poisonous, producing severe and continued vomit-

ing and purging, prostration and death—in other words, cholera infantum, which Dr. Vaughan regards as synonymous with “thilk infection.”

The cause of milk infection or cholera infantum invariably originates in the food, but the poisons which produce the disease have not been recognized in any other food than milk or some milk preparation. All such cases are to be regarded as cases of acute poisoning, and acute milk infection is poisoning with a substance more powerful than arsenic.

For these reasons the use of raw milk as a food, particularly for infants and invalids, has come to be looked upon with more or less suspicion and the question arises, if suckling is impossible, must we give up what we have found to be the food designed by nature for all mammals in the earliest periods of their life, or can we prevent the entrance of germs or render them innocuous if they once get into the milk?

Looking first at the prevention of the entrance of bacteria into milk, it may be said once for all that, except as a matter of scientific interest, carried out with the utmost scientific precautions, it is absolutely impracticable to obtain milk from the cow which is free from germs. This may seem a startling statement, but its truth is absolute. To obtain milk free from germs it has been found essential to first wash the udder and surrounding parts with soap and water, then with a solution of corrosive sublimate, then again with boiled, rapidly cooled water. The milker's hands must first be washed in ether and alcohol, then in sublimate solution and then in boiled water. The cow must be milked in the open air and the milk collected in glass vessels which have been heated for several hours to at least 212° F., and which have been plugged while hot with sterilized cotton wool. After filling with milk, the vessels must be again plugged with cotton or hermetically sealed. Milk so collected may be kept indefinitely and is germ free. It is evident, however, that such processes are not applicable to practical dairying where milk is to be used for food. While, however, milk cannot commercially be collected and preserved free from germs, much can be done to minimize the number of bacteria in milk.

In the first place, it need hardly be stated that only healthy cows should be kept in a dairy and a breed selected which is not prone to tuberculosis, about the only disease which need be guarded against as furnishing a milk which, while still in the udder, may yet contain infectious germs. It seems to be established that the Jerseys and Short-horns are, of all, most prone to tuberculosis. I have not yet been able to find record of any case of tuberculosis among the Brown Swiss.

One advantage of the milk from a herd over that of a single cow

is that in all well regulated dairies it is arranged that fresh cows are continually coming in at short intervals all the year through, and the changes in the composition of the milk due to the period of lactation are avoided in the mixed milk which is kept of uniform quality. The milk product of a herd of healthy cows is much less liable to variations so injurious to the infant's digestion than is the milk of a single cow.

The most prolific source of infection is found in unclean dairy utensils. All cans and strainers should be of metal, and after using should first be washed in luke warm water, as boiling water will coagulated the proteids of milk, and so make perfect cleansing more difficult, then in hot water and soap suds, again in clean hot water and finally placed over a jet of live steam for several minutes. They should then be left to drain in an inverted position, exposed to the sunlight and air. It should not be forgotten that the air of the milk stable is always apt to contain myriads of bacteria. These largely come from the dust which adheres to the body of the cows. Hence hay should always be spread on the feeding floor, at least two hours before milking time so as to allow the dust to settle, while the stables themselves should be kept scrupulously clean by daily scrubbing and frequent white washing, the cows thoroughly groomed at least once a day, and if curried in the stable, this should only be done after milking is over. The milker's hands should be carefully washed with soap and water and then dried before milking, while a clean outer garment should be used during the milking and kept for this purpose only. It should be an invariable rule to reject the first portions drawn from each teat, for even after the most thorough milking there will always remain in the teat a few drops of milk, which afford admirable facilities for the development of germs which are extremely likely to find access to the opening in the teat as the animal reclines on the ground, or in the stable. Finally it should be an invariable rule that the milk should not be strained in the barn where the milking is done, but first carried to a separate room, for the processes of straining exposes so much surface to the air that it should be done under conditions less favorable to contamination than in the stable. It should be recognized, however, that milk may be contaminated after delivery to the consumer as readily as before, and often milk is condemned as of poor quality when it has been made so by its treatment after it has left the producers' hands. If left where dust can settle in it or flies have access to it, or if set in a poorly ventilated cellar or in a warm place, or if kept in a refrigerator with meat or vegetables, from the readiness with which it absorbs odors, it is pretty sure to be in a bad condition in a few hours no matter how good it was when delivered to the consumer,

It is hardly necessary to add that the water supply should be subjected to the most rigid scrutiny. No water should ever be used around a dairy that comes from shallow wells, creeks, ditches or that could in any way stand the remotest possibility of contamination with sewage.

After the milk has been removed from the barn it should again be strained, and then rapidly cooled and aerated by the use of one of the many apparatuses designed for this purpose, and the lower the temperature to which the milk is reduced the better, for it has been found that by artificial lowering of the temperature the growth of bacteria, and the consequent decomposition in milk, can be more and more diminished until at about the freezing point they are brought to a stand still. By freezing, milk can be preserved almost indefinitely, but there are many objections to relying only on this method for the care of milk. In the first place if milk is actually frozen the physical properties of the milk are changed. Again, it is impossible to maintain the low temperature during the transportation and distribution of the milk, but more important still, even were this possible, cold alone cannot be relied upon as a means of avoiding the danger attending the growth of organisms in milk. While a low temperature, say 40° to 50° F., arrests the growth of organisms, it does not destroy them. They remain dormant in the milk, and as soon as the milk is warmed, even up to 60° to 70° F., they again resume their activity as vigorously as if they had not previously been cooled. Milk which contains bacteria and which has been cooled to a low temperature will remain sweet only as long as it remains cold: but it must be warmed at some time, either before drinking or after its introduction into the stomach and then all the organisms, both those which are the cause of specific diseases, if they should happen to be present, and the non-pathogenic, will commence to grow; so by cold alone there is only produced a false sense of security which may lead, from the apparent sweetness, to the consumption of an article which may be rank with the germs of disease.

While cold, then will only delay without preventing the fermentation of milk, and will only check without preventing the growth of bacteria, both pathogenic and non-pathogenic, with the attendant dangers, heat on the other hand, if properly applied, furnishes us with a sure means of destroying all bacterial activity.

We have seen that the entire prevention of the entrance of the germs into milk, all of which are of extraneous origin, is impossible, and although much may be done to minimize the danger, milk must always be regarded as containing more or less bacteria which may or perhaps may not be inimical to health, according to the nature of the germs and the resisting power of the individual who takes them in his

food. If we possess a means of absolutely removing this danger it is self evident that indifference or ignorance can only explain its neglect.

It has long been known that boiled milk would remain sweet much longer than raw milk, and this is readily understood when it is remembered that the temperature of boiling water kills nearly all forms of bacterial life. But although boiling will extend the time during which milk remains sweet it will not completely sterilize milk, for although the temperature of boiling will destroy active bacteria it will not kill their spores, and if any culture fluid containing spore-bearing germs be heated to 212° F., and then kept at a warm temperature the spores will then begin to germinate. Tydall, however, showed that if the fluid was *again* heated to boiling before the bacteria developed from the spores, and this process of alternate heating and cooling be repeated at successive intervals of a day, all the organisms in any culture medium will be destroyed and the fluid rendered sterile. Hoppe was the first to apply this method of successive heatings to milk and found that three exposures to 212° F. on successive days, or heating five times on successive days to 155° F. was sufficient to sterilize milk. Although such a process is commercially impracticable, the single application of the boiling temperature to sterilize milk was a few years ago quite common, and various forms of sterilizing apparatus, both for home and dairy use were put on the market. In nearly all the fresh milk was placed in glass bottles and then subjected to steaming for a few minutes, and the bottles then closed with rubber stoppers. Such a process does not, as has been already stated, sterilize the milk; for a single application of the boiling temperature does not destroy spore-bearing bacteria. And although such milk will not sour, for the lactic acid forming bacteria *are* destroyed by a single heating, and such milk will remain sweet for several days, even if hermetically sealed it will sooner or later undergo some other form of putrefaction due to other organisms than those which produce lactic acid. All the pathogenic bacteria, however, are destroyed by a single boiling.

But while milk so heated is freed from all bacterial dangers, it does not follow that the process is a desirable one.

In the first place the milk acquires the well known taste of boiled milk and when heated under pressure it becomes brownish in color with flocculent masses floating in it of a most unappetizing appearance.

Further, our belief in the hygienic value of milk so treated has of late been much shaken. At first it seemed that digestive disturbances, especially in children, were greatly benefited by the substitution of sterilized for raw milk and numerous reports were published, both from hospital and private practice, which seem to show that cholera infantum yielded readily to its use. But in a more careful analysis of

the apparent effects of sterilized milk the results are found to be far from favorable. From a report published on this subject by Dr. E. P. Davis we learn that after the introduction of sterilized milk in infant practice in the Philadelphia Hospital there was at once a considerable improvement in his cases which at first seemed attributable to the use of the sterilized milk; but it was soon found that infants did not thrive on sterilized milk, and although recovery from the acute disorders in most cases took place, it was only to succumb to gradual starvation. Various abnormal symptoms soon appeared, and in many cases the infants died from what appeared to be insufficient nutrition. In all cases it was found that the use of sterilized milk resulted in but a temporary improvement and where the infant had only sterilized milk as its resource it always failed. Dr. Davis' conclusion has been confirmed by numerous other careful observers, a result which is readily comprehensible when we recognize what the effect of heat on milk must be.

[To be continued.]

New York Letter.

NEW YORK, N. Y., March 31, 1897.

To the Editor of THE COLORADO MEDICAL JOURNAL:

The city is beginning to evidence the approach of spring, that is to say, the cyclists are appearing in swarms, the grass is showing a little green in the parks, and it is so warm that overcoats may be left at home during the day, so that the meteoric environments are much more pleasing than they were at the time of my last letter.

Work at the hospital goes on with its daily crowded program of lecture, clinic and operation. I am just completing a very satisfactory special course in microscopic anatomy of the brain and cord, given by Dr. Geo. R. Elliot under direction of Dr. C. L. Dana.

Dr. A. A. White, of Trinidad, is at present my only Colorado compatriot. There are matriculates here from China, Hawaiian Islands, Nicaragua, Scotland, Kansas and other foreign regions.

On the evening of March 19th, the scholarly president of the faculty, Dr. Roosa, read an interesting and quite conservative paper on "The Indications for Operation on the Ear."

A lecture on the tics, by Dr. Collins, made that subject plain. He makes two classes, local and general. The first subdivided into blepharospasm, facial tic, trismus, lingual tic, torticollis and combinations of these. General tics are: Tic coordiné, simple general tic and myotonic or electrical tic. Conium is of use in the treatment of the condition. Bromides or a combination of nitroglycerin and potassium iodide are also used.

In his beautiful abdominal surgery, Dr. Morris is accustomed to apply aristol to peritoneal wounds in order to prevent adhesions. He did a double nephrorrhaphy last week, using one knife, one curved needle and two catgut sutures. Corsets are by him thought to be a leading factor in the production of movable kidney.

Dr. W. J. Morton has recently taken a skiagraph of the whole human body with one exposure, using a sensitive film six feet by three. The X-ray is in daily use by the leading surgeons.

I was fortunaté enough a few days ago to examine microscopically a specimen of urine containing the hæmatobium Bilharzii. It was discovered by Dr. Brooks in the urine of a case of Dr. Edebohl's.

A few evenings ago Dr. Lloyd gave a practical demonstration of the use of an ordinary wash boiler as a sterilizer. Six inches of water containing some soda is placed in the boiler and the instruments (except the knives) are wrapped in a towel and thrown into it. A towel is slung, hammock-like, between the handles and into this are put bundles of dressings, towels, gauze sponges, operating suits, etc. The lid is fastened on tight and sterilization is complete after 30 to 45 minutes boiling. Knives are treated with 95 per cent. of carbolic acid.

From Dr. Dana's clinic: In a lecture on sleep, this analogy was made: Sleep is a cerebral defecation; excessive sleep is a cerebral diarrhœa; insomnia is a cerebral constipation.

A case was shown, the patient having slept continuously for four days, waking only when fed. In speaking of headaches, Dr. Dana said that chronic occipital headache is usually from over strain, neurasthenia or pelvic disease; chronic frontal headache is often due to eyestrain, but almost never from pelvic disease; chronic vertex headache is frequently a sign of anemia or malnutrition; chronic headache of irregular distribution is usually syphilitic.

Dr. Hammond reports that a case of athetosis in which the median nerve was stretched has not been improved, though this procedure is sometimes of use. He also demonstrated a fourth sign of exophthalmic goitre, discovered by Dr. Louise Fiske Bryson; this is a very marked loss of chest expansion.

Dr. Phelps remedies ankylosis of the hip joint by fracturing the femur just below the great trochanter, scooping out a cavity in the upper fragment and rounding off the end of the lower fragment; a piece of fascia lata is placed between, a new joint thus being made. The doctor did an excision of the knee joint a few days ago, the time from the first incision to the completion of the plaster cast dressing being seven and one-half minutes.

Dr. Powell applies pure carbolic acid to tuberculous ulcers or

diseased bone in order to destroy the tuberculous element and convert the lesion into a healthy wound.

Dr. Caillé intubated a case of diphtheritic laryngitis before the class a few days ago. The child was almost in extremis, but after three injections of antitoxin the child is now well. The tube was coughed out on the floor on the fourth day and was not replaced.

Pomate of iron, a preparation of apples, is given in the children's clinic as a pleasant method of administering iron.

I have just refused to sign a petition for the keeping of imported mineral waters on the free list. I think Colorado can furnish any kind of mineral water that this country needs.

I shall stop now, though I have given almost nothing of the interesting matter derived from the clinics, as compared to the vast amount set before us. Would like to tell you how New York looks from the top of the Statue of Liberty, but there isn't time. I will write one more letter from the Post-Graduate school, and my next will be from Johns Hopkins.

G. H. STOVER.

The Denver and Arapahoe Medical Society.

This report is original with this JOURNAL, and appears only in this Journal.

The first March meeting was held on Tuesday evening, March 9th. There were present at the meeting: Drs. Jayne, Pfeiffer, Edson, Whitney, Munn, Bane, Herrick, Love, Roberts, Zederbaum, Spivak, Hopkins, Hassenplug, C. A. Powers, Blaine, Mann, Hill, McCann, Van Zant, R. B. Freeman, Mussey, Macomber, Taussig, Hickey, Mitchell, Boice, Levy, L. Freeman, Wetherill, Coover, Snitcher, Liebhardt, Kinney, Schollenberger, Hall, J. J. Powers, Fisk and Axtell. After the minutes the ballot was cast for Dr. George Tyler, and he was elected to membership.

Dr. C. B. Van Zant in a paper entitled, "Two Recent Tests for Typhoid Fever," reviewed at length Widal's test for typhoid as well as the Diazo reaction of Ehrlich which reacted in 70 per cent. of cases reported by Dr. William Osler. Dr. William C. Mitchell read in conjunction with this paper one entitled, "Bacteriological Diagnosis in Typhoid Fever," which appears in this number of THE JOURNAL. This probably records the first work done with Widal's test in the West and it is with pleasure that we publish this paper. Discussion on the two papers was participated in by Drs. Fisk, Pfeiffer, Munn and Hall.

Dr. Fisk reviewed the cases whose blood Dr. Mitchell had examined for him. In the third case reported a robust man with

headache and epistaxis came down with fever for a few days, but after six days in bed got up, complained of pain in his right leg and now has a phlebitis in this leg. Personally Dr. Fisk thought the test of value. He thought that we had here a species of fever, mild and continuous, which he had called abortive cases of typhoid. He was anxious to know if this test would throw any light on such cases. If it did it would be of the greatest service.

Dr. C. D. Spivak read a paper on "Chelidonium Majus in the Treatment of Inoperable Cancerous Growths." He reviewed at length the use of this drug in inoperable carcinomas, by both local and hypodermic application. Personally he had used the drug in two cases, but he gave particular attention to the Russian literature on the subject. One of his cases on the tincture of chelidonium for three weeks, improved. One, a case of cancer of the oesophagus, died. His paper was discussed by Drs. Axtell, Edson and Powers.

Dr. W. C. Bane reported a case of nasal polypi in which he removed 25 of these benign growths from the right nostril and 16 from the left nostril of a strong, healthy man. As exhibited they varied in size from a pea to a lima bean.

Dr. Fisk moved that it be the sense of this Society that the health department of this city be requested by this Society to make Widal's tests for typhoid fever in the city laboratory.

Dr. C. J. Ferguson, of the Denver Medical College, Class of '92, was proposed for membership by Drs. R. Freeman and Spivak. Dr. T. J. Gallaher, of the University of Pennsylvania, Class of '89, was also proposed for membership.

Dr. Pfeiffer, a member of the legislative committee of the State Medical Society, asked the members of the local Society to lobby against the osteopaths who were trying to get their bill passed.

Dr. Levy wanted to know if present medical bill had any show of passing, and he was informed by Dr. Hall that the bill had passed the house that same day. The bill as presented was ordered read by the Secretary, and after its reading a general discussion was participated in by Drs. Blaine, Pfeiffer, Coover and Hall.

Dr. Fisk reported for the committee on American Medical Association that reports from all over the state were encouraging. Colorado Springs people are taking the matter seriously in hand. The Glenwood Springs Company have contributed \$200, and will tub the entire crowd and pay their expenses. He reported that 34 members had thus far contributed.

* * *

The second March meeting was held on Tuesday evening, the 22nd. President Jayne presided. A communication was received

from the legislative committee asking that the state senate be memorialized to the effect that the Society as a whole was in favor of the proposed new medical bill. It was at once moved and carried that this Society record itself as heartily in favor of the medical bill now before the state senate, and that Senator Locke be notified of the action at once by a committee appointed by the chair. A committee consisting of Drs. Chase, Burns and Nichols was appointed to deliver this memorial.

Dr. E. C. Hill, of 1616 Glenarm Street, a graduate of the Gross Medical College, Class of '91, was proposed for membership, as was also Dr. W. J. Raynor, a graduate of the Ohio Medical College, Class of '81. The Censors reported favorably on the names of Drs. Ferguson and Gallaher, and on ballot they were elected to membership.

The committee on American Medical Association reported that already over \$6,500 had been subscribed and that the objective point of \$15,000 was in sight. They were very much enthused and felt that nothing remained in the way of extending the invitation. The only other two cities in the contest so far as reported were Omaha and Columbus, O.

The Symposium on Cerebral Surgery was opened by Dr. Eskridge, who spoke on "Cerebral Surgery From a Neurologist's Standpoint." He said that surgeons and neurologists must act in consort in cerebral surgery. Difficulties in diagnosis were often insurmountable, and it required the cool judgment of mature deliberation. Septic thrombosis, meningitis and abscess are three diseases that may exist together and are often due to ear trouble. In such cases the neurologist must exert great care. The surgeon must then be called in and a consultation held. In absolutely hopeless cases without operation the neurologist must strengthen the hands of the surgeon. Speaking of heart tonics before operation, he said that the neurologist had often to direct their use. Frequent consultations at every step were in his opinion necessary in these cases.

Dr. Pershing spoke on the question of cerebral surgery in the treatment of epilepsy and insanity. He said that cerebral surgery on the whole has been disappointing. The triumphs that have been achieved have been mostly in cases of cerebral abscess, and in a few cases of tumor. The task set for him was less pleasing. In epilepsy the difficulties to be overcome are enormous, and the pitfalls numerous. He said that it is well known that a new medicine, a change of residence or air, may stop epileptic attacks temporarily, and that it is to be remembered, if apparent results are obtained after operation. Personally he did not believe idiopathic epilepsy

to be susceptible to operation. Simple trephining may arrest the attacks for months, however. Jacksonian epilepsy was somewhat different. In it we can say that a certain spot is irritated. But even here neurologists and surgeons are disappointed. The irritation is of long period and proliferation of neuroglia and degeneration of cerebral cortex has taken place. The irritation may be lessened, but changed brain tissue remains. If this part is removed a scar remains, and this is sufficient to bring about a return of the attacks. Two years must elapse without attack if the operation is to be counted successful. Mental diseases have been arrested by major accidents and a few years ago it was thought that trephining in dementia seemed to produce some results, but the operation is not made now. It is now known to be a degeneration, and not susceptible to operation. Idiocy due to microcephalus seems to give us results by operation. We read of results, but have need to question them. Certainly such cases never reach normal. The greatest point that the neurologist can insist upon is that the surgeon at the time of head accidents sees that there is no depression.

Dr. Freeman presented the technique for operations for abscess of the brain and for hydrocephalus. He said that brain abscesses are fatal cases without operation and that the surgeon ought to be willing to operate in these cases. Cerebral abscesses may be without the brain, in the membranes or in the brain itself. The technique embraces surgical cleanliness. You can do almost anything you please with the brain, provided you keep it clean. Even in cerebral abscess the field of operation must be kept clean, for one may make a double infection and again, one's diagnosis may be wrong. He said that the hair and eyebrows must be shaved, the ears cleansed and that an elastic bandage might be wound around the forehead, ears and occiput. If the mastoid is opened this wound must first be cleansed and sealed. He thought a trephine was better to use than a chisel and mallet, as with such instruments a thin walled abscess might be ruptured. After the dura is exposed it is to be punctured by a needle or opened by a crucial incision. If no pouching presents we may not need to open the dura.

Small openings through the cranium with a drill have been advised. He would not advocate this plan, as a small vein may be punctured and blood may accumulate under the dura and do damage. For puncturing the brain he used a trocar or a grooved director or, probably even better, a hypodermic needle with the point ground off. A number of punctures may be made. In ear trouble, as acute purulent otitis media, he would advise vigorous treatment, for it is from the chronic forms which remain that

brain abscesses develop. The best treatment of the early symptoms of purulent meningitis are to open the antrum and the mastoid cells. If in 24 hours the symptoms have not subsided, the cranial cavity can be opened. It is advised to open from the same operative area, the posterior fossa. But this operative area is infected and he believed it better to make additional openings.

Dr. McNaught reported the case of a young lad, aged 14, who was struck by a moving engine, and who received an incised wound in the posterior part of the head. No fracture was apparent under the wound, but on manipulation a crepitation could be discovered. Blood came from both ears and the nose. The head was dressed antiseptically. The pulse and temperature continued to rise until the third day, when both came down to about normal and the pulse became irregular. Patient still remained comatose. The right side was now noticed to be paralyzed. The bladder and bowels were also paralyzed. He went along in this fix, but after a few weeks he was able to open his eyes and apparently recognized his mother. From that time he improved and after three months he was able to leave the hospital, and to-day is apparently well. Examination of ear revealed a rent in this membrane.

In this case a fracture in the posterior fossa was no doubt present.

Dr. Rogers took up the *modus operandi* in cranial fractures and epilepsy and said that displaced bones and unabsorbed blood clots may be the damaging factors in cranial injuries. In cranial wounds we must base our procedures on averages rather than on symptoms. In cranial wounds of any extent we must explore. Yet we will meet many obscure cases where it is a question what ought to be done. We must weigh every factor in these cases, force of blow, position, nature of wounds, etc. With a slight injury, the reaction of the skull may close a small opening, and yet some damage may be present. If you are a surgeon and are in doubt, operate. He dwelt upon technique at length and asserted that a case of extreme fracture with comminution, must be operated even if no symptoms are present. It is the small perforating fractures that worry the surgeon as well as the fissured fractures. If any possibility of sepsis is present drainage is absolutely necessary. He thought a small trephine better than the chisel and mallet, and thought Keen's rongeur excellent. He cited two recent cases of cranial fracture—one a boy who was struck with a brick. A linear fracture of the inner plate was present and the linear depression which existed sprang into place on pressure upward after trephining. The other was that of a man who had a mine bucket fall on his head, producing an im-

mense fracture. In cases of fracture where much bone is lost by injury he thought it best to close the wound without using gold foil. Later on a secondary operation could be made and the foil introduced. This was usually necessary because of the primary attendant infection. As to the question, "When are operations for epilepsy indicated?" he thought that it ought to be answered, "Only when some distinct lesion is present."

Dr. Axtell stated that he had made post mortems on a number of cases of cerebral abscess and he had never seen any pus in such cases that would run through a hypodermic needle or even through a grooved director. He thought a free incision ought to be made in exploration.

Dr. Grant thought a cicatricial mass was as bad as a depressed fracture, and in cases of cranial fracture without the dura being opened he would be tempted to simply close the wound up.

Dr. Rogers wanted to call attention to the fact that a patient may escape epilepsy even with a large piece of bone in his brain. He cited a case occurring four years ago in which a spicula of bone was driven into a man's brain, and yet he has not had epilepsy since. Bullets also lodge in brains and do not cause symptoms.

Dr. Eskridge thought the subject too large for a definite review. He stated that he had recently seen a statement from a German authority that in exploring for abscess the knife ought to be used.

Dr. Freeman thought that a trocar with a hypodermic syringe would get the pus from a cerebral abscess.

Dr. Richardson reported a case of cirrhosis of the liver and a case of kleptomania.

Under the head of unfinished business the following letter from Mayor McMurray was read:

"DENVER, COLO., March 18, 1897.

"C. D. Spivak, Secretary Denver and Arapahoe Medical Society:

"DEAR SIR:—Your communication of March 10th, giving me a copy of a resolution passed by your Society urging the mayor and health commissioner to extend the scope of the scientific work of the health department, is received.

"I would be very glad indeed to comply with the request of your Society, and I know that Dr. Munn is of the same opinion, but under the limited appropriation of the department I doubt very much whether we will be able to do so immediately. We trust, however, that such work will soon be taken up by the department and prosecuted as requested by you.

"When we consider that the entire appropriation of the depart-

ment is only \$4,200 and that out of that we have to pay for cleaning alleys and removing garbage, you can readily see that requires the closest economy to carry on even the matters that are of the utmost pressing necessity. Our hospital expenses have been very heavy, but we hope soon to be able to see our way clear to take up your recommendation. Yours truly,

T. S. McMURRAY, *Mayor.*"

It was moved that the letter be published in the daily press.

The following members were present, as were the senior classes of the medical schools of Denver: Drs. Jayne, Spivak, Eskridge, Pershing, Nichols, Hassenplug, Burns, Chase, McNaught, Hopkins, Zederbaum, Richardson, Huffman, Higgins, Stockwell, Lyman, Mussey, Grant, Denison, Freeman, McCain, Harvey, Sewall, Beggs, Love, Conroy, Gallaher, Bell, Hershey, Macphatter, Pfeiffer, Yeager, Lobingier, J. J. Powers and Axtell.

Denver Clinical and Pathological Society.

This report appears exclusively in this Journal each month.

Drs. Black, Blaine, Coover, Craig, Fish, R. B. Freeman, Hall, Hershey, Higgins, Hopkins, Jayne, LeMond, Levy, Lobingier, Macphatter, McNaught, Mann, Pershing, Powers, Walker, Whitney, Edson, Bergtold and Axtell were in attendance at the regular monthly meeting of the Denver Clinical and Pathological Society on Friday evening, March 12th, and were entertained by Drs. Black, Blaine, Craig and Whitney at the Steele Block.

Dr. G. M. Black acted as President pro tem. in the absence of Dr. Parkhill. The minutes of the last meeting passed approval and the membership committee reported the election of Dr. T. J. Gallaher and the discontinuance of one member for non-attendance. Dr. Edward Jackson's resignation by letter was accepted, and Dr. S. G. Bonney was proposed for membership by Dr. Macphatter. Dr. Samuel Meur and Mr. Totman, as guests of the Society, were invited to participate in the proceedings.

Dr. Bergtold reported a case of a colored man, 32 years of age, who had lived in Colorado since 1890, in whom an abscess of the liver was diagnosed, which diagnosis was confirmed by the abscess breaking into a bronchus with pus and the amoeba coli appearing in the sputum.

Dr. Powers reported the operation on this case.

Dr. Bergtold reported another case of an elderly woman who suffered from advanced phthisis, with a large cavity in the lower

right lung in which vocal transmission of her voice was perfect. Drs. Pershing, Whitney, Hall, Axtell, LeMond, Craig, Hershey, Higgins, Powers and Bergtold discussed the subject.

A case of a man whose pulse dropped, under chloroform, from 80 to 40 beats per minute, with absolutely no disturbance, was reported by Dr. Hall. He also commented upon the fact of such a general denial of syphilis and gonorrhea among applicants for life insurance.

Dr. Whitney reported a case of second confinement in which one breast was found to be entirely useless for nursing, although normal in appearance and in which milk was present, but the nipple seemed to have no gland ducts. This same thing occurred to the same breast in the mother's first confinement.

Dr. Pershing reported a case of hysteria in a man, 21 years of age, a Russian Jew. The attacks commenced seven years ago, shortly after an accident of falling overboard. He was sent to this country for phthisis. The man was treated by suggestion. Discussion by Drs. Hopkins and Pershing.

Dr. LeMond offered congratulations to Dr. Black upon a paper recently written by him attacking "Doctors of Refraction."

Dr. Black reported a case of inflammation of the left antrum of Highmore, which was not aborted by treatment. As the patient was a woman who had a perfect set of teeth, it was decided not to sacrifice a tooth. A puncture was made through the alveolar process beside the second molar tooth on the palatine side, and a perfect recovery followed.

Dr. Black reported and exhibited a new instrument of Dr. Stevens', the tropometer. Discussion by Drs. LeMond and Black.

After lunch the Society adjourned.

LEWIS M. WALKER, *Secretary*.

Woman's Clinical Society.

The report of this Society's meetings appear in this Journal only.

A regular meeting of the Denver Clinical Society was held March 16th. Dr. Love, Vice-president, presided. There were present, Drs. Bedortha, Goodman, Lawney, Love, Roberts and Gale. The minutes of the preceding meeting were read and approved. Balloting for new members resulted in an unanimous vote in favor of Dr. Yout.

The subject of the admission of the recent graduates to the County Hospital was discussed. The Society agreed with the ac-

tion taken by the women practitioners of Denver that an appeal be made that women be given equal representation as internes on the County Hospital staff. Dr. Lawney, at Dr. Jayne's request, presented the subject of a Society donation for the entertainment of the American Medical Association, if it met in Denver in 1898. This was deferred for future action.

The medical subject for the evening was angina pectoris. Dr. Goodman reported interesting cases and Dr. Lawney one of pseudo-angina in a syphilitic case in which marked and rapid improvement occurred under the iodides and the usual remedial agents.

The meeting adjourned at 10 p. m.

M. JEAN GALE, *Secretary*.

News Items.

Dr. E. H. Fish, of this city, journeyed toward Pueblo on business last month.

Dr. Sullivan Howard, of Boelus, Neb., is visiting in Denver at the present time.

The bacteriologists are extending Widal's test to water supposed to contain the typhoid germ.

Dr. and Mrs. Greene, of Minturn, Colo., swelled Denver's population by two during a short visit in March.

Dr. G. H. Gibson has escaped the disagreeable spring weather of Denver by going to California at this time.

Denver was recently honored by a visit from Dr. Solly, of Colorado Springs, and by Dr. Stowe, of Glenwood.

Dr. G. M. Black read a paper before the Pueblo County Medical Society last week. He also visited Leadville.

Dr. Hugo Mager was in a wrestling match a few days ago, and got the worst of it. The other fellow was La Grippe.

Dr. G. B. Webb, of Colorado Springs, was in attendance at the commencement exercises of the Denver Medical College.

The medical service of the Day Nursery is now in charge of Drs. Sewall, Hall, Peavey, Brasher, Waxham and Hopkins.

We have received reprints during the past month from our friends, Drs. Coover, Hill, McLauthlin, Murrell and Eskridge.

Dr. W. S. Brown, of Apex, Colo., is in Denver thawing out. He reports snow at Apex anywhere from 40 inches to 30 feet deep.

The wedding of Dr. Hugh L. Taylor and Miss Sallie Bomber-

ger, both of this city, took place on Wednesday evening, April 15th.

Dr. and Mrs. J. W. Graham, who spent a very pleasant vacation during the late winter season in Florida, got home to Denver the last of March.

The British Medical Association will meet in Montreal, Que., in August next. This is the first time the Association has met on the American continent.

Dr. D. H. Coover, who has been at the "repair shop" for the past week, is out again now, and we hope he is in better "running condition" than ever before.

The chief of police of San Francisco says that the anti-expectoration law is a good one, but that he would need about 20,000 special policemen to execute it.

Dr. Henry Sewall is serving St. Luke's Hospital in a capacity other than visiting physician at present. Necrosis of the rib is the cause of the change in his regime.

Dr. P. R. Thombs, of Pueblo, came up to Denver in March to importune the legislature for help to check the accumulating deficit of the State Insane Hospital funds.

Dr. Mittie Bradner, who has been practicing in Denver for several years past, is now located in Waco, Tex., where she has the distinction of being the only lady physician in the city.

Dr. J. F. Kaster, of Denver, the new surgeon of the Santa Fe at Topeka, succeeding Dr. G. W. Hogeboom, removed, has arrived and will be installed in his new position within a few days.—*North American Medical Review* for March.

Dr. A. R. Seebass will leave Denver for a two months' vacation in his old home in Germany the last of April. He will "brush up" some on his medical lore while in the City of Science. He has promised THE JOURNAL some letters while there that we are sure will interest our readers.

The Gross Medical College faculty are scattering to the west and to the south for their vacation trips. Dr. C. K. Fleming goes to Salt Lake City the last of this month, and Drs. Hawkins, Freeman, Lamont, Hershey, Levy and Macphatter will go to Paris, Tex., to attend the meeting of the state medical society at that place April 27, 28 and 29, 1897.

Denver is to lose one of its promising young surgeons by the removal of Dr. E. H. Fish to Providence, R. I. Dr. Fish has since his graduation from the Denver Medical College been Dr. Parkhill's first assistant in surgical work, and was rapidly earning a name for

himself in that branch of work. We regret that a betterment of circumstances takes him away from Denver permanently.

Among the many bills which occupied the serious consideration of the state fathers was one by Mr. Lewis, prohibiting the sale of morphine in any form except upon the prescription of a physician, surgeon or dentist. The bill has since become a law and physicians will now be asked to write "*R Morph. sulph. ʒi*" oftener than they have been and it is safe to say that their prescriptions will be copied and repeatedly refilled. Thus will the law soon be inoperative.

There is much agitation at present among the women doctors of Denver over the action of the advisory board of the county commissioners in refusing to admit women graduates from the various medical schools of this city as internes to the County Hospital. The women are thoroughly aroused over what they claim is a gross injustice and by concerted action and agitation of the question through the faculties of the medical schools and the Woman's Club they expect to gain their point.

In a recent examination given to applicants for teacher's license, prepared by Miss Patton, superintendent of public instruction, among those on physiology we notice the following: "What effect has high altitude on the nervous system?" As this is a question which puzzles the most learned of our medical men, and the subject of much disagreement among eminent neurologists, we think that with Miss Patton, as well as with a great many educators, that "a little learning is a dangerous thing."

The statistics of a physician's directory company of New York show that over 4,000 medical students graduate yearly from the medical schools of the United States; that there is an average death rate of physicians in this country of from eight to ten daily; half as many more retire from practice, or relinquish the profession for other occupations every day. The changes of location from town to town, and in cities from street to street, are constantly going on and reach something like 30,000 changes every year.

Messrs. Parke, Davis & Co., of Detroit, recently sent us a descriptive illustrated circular of their pharmaceutical laboratory which shows in complete details the latest physiological apparatus for determining the action of medicinal agents upon the different organs of the animal body. It is by high scientific work of this kind that this firm stands so near the hearts and confidence of the medical profession. Dr. Hobart A. Hare, professor of therapeutics and materia medica in the Jefferson Medical College, Philadelphia, is now the consulting therapist for the house.

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SUCCESSOR TO
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A Monthly Journal for the Medical Practitioners of Colorado and Adjoining States.

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VOL. III.

DENVER, COLO., APRIL, 1897.

No. 4

Editorial.

The Colorado State Medical Society.

This Society convenes June 15, 16 and 17, 1897. The Executive Committee are doing some preliminary work that ought to accomplish much good. Probably in their bid for members they will take in men who have no right to membership, but such men can be gotten rid of. In their bid for papers they will probably get too many, as usual, most of which have but little interest.

The Society is now large enough to have sections and we believe that sections embracing, (1) Surgery and Practice, (2) Gynecology and Obstetrics, with Pediatrics, and (3) Eye, Ear, Nose and Throat, would add greatly to the interest and to the work of our Society. Such a plan would enlist the active services of section officers and this responsibility would increase their interest.

Personally we do not believe the ordinary of the Brown Palace Hotel to be a satisfactory meeting place. It is hot, noisy and with bad acoustic properties, and when a large number is in attendance cannot accomodate the members with ease.

It is to be hoped that the various committees' work will be done and reported when called for this year. The regular scientific program ought never to be interfered with by delayed committee work.

We understand that the Executive Committee have many pleasant surprises in the way of entertainments. The meeting at this time promises to be a successful one.

The Psychology of the Prize Fight.

The celebrated prize fight is over and instead of both men being knocked out, as we had hoped, one man parades the country, stating that he is "the proudest man alive," and other like rot that apparently entertains a large majority of our populace. The study of the interest that the prize fight elicited is important enough to engage the attention of those who profess and believe that we are becoming more civilized and that various manias no longer afflict the greater part of our people at one time. From our point of view the majority of the American population on the 17th of March, 1897, reverted atavistically to the brutal, savage days of yore, when drinking out of the fresh skull cap of an enemy was considered just the thing. And such a reversion we believe has been harmful to the people as a mass. Its impress will be felt in savage deeds, in bloodshed and in a lowering of moral tone. Perhaps the reaction will be sufficient to leave the impress but for a short time.

Studying the tone of the people as indicated by the desire for "fight news" and the readiness with which the public press accommodated its patrons, one is led to believe that in the breast of every man there is a savage instinct still dormant which requires only a spark to light it up.

"As for the prize fight, one can only read and ponder, ponder as to what sort of soul the champion of the world has, and what may be the ideas of life which animate the brain of a woman who stands and yells at her husband to 'Punch the hound in the wind,' and actually swears and raves as the fight goes on. One can scarcely think of them as people; it seems that their proper place would be in the zoo, with keepers to guard them. However the prize fight touches the popular chord, and so does everything else that is reckless and rude, with a dash of jauntiness and a hint of lawlessness thrown in."

For the loser the average man feels a pang of sorrow. It probably comes from our own life's experience. When we fail in the accomplishment of our desires and hopes, we are sorrowful and we feel so for others when they fail.

In a summary of the fight as detailed by the newspapers we gleaned that apparently fear had something to do with the loser's loss. It is an element that must come in, in any such a contest and it is sometimes more powerful than the opponent's strength.

The rapidity with which the public interest subsides after the final outcome of such contests is an element of hopefulness and prestigages the speedy fall of pugilism. One wonders how quickly these disgraceful exhibits would cease if there were no restrictive

laws preventing such exhibitions. It is a part of man's nature to resist the encroachments of individual freedom, and apparently the "hint of lawlessness" of these exhibitions is a factor in their success. The whole subject will be carefully studied by the philosopher of the next century.

† † †

Consolidation of Denver's Medical College Dispensaries.

The New York medical press and even the daily papers of that city are now much interested in the discussion of the dispensary abuse, and some startling facts have been developed which should warn other cities in which the evil has not yet reached the climax, that they are nevertheless on the same road and rapidly making progress in the same direction.

The suggestion has already been made in this Journal that in Denver the abuse of the free dispensaries for the poor is fast assuming vast proportions, and better still a good and sufficient remedy which is practical in every respect has been suggested; one which can work no hardship upon any deserving poor person, and one which will simplify and facilitate the operations of a free dispensary, making it easier for the physicians in attendance, and giving better, cheaper, and altogether more satisfactory teaching facilities to the various medical schools. Further than this it is not improbable that such a movement might be the first great step toward the union of the schools which is so very much to be desired.

"In union there is strength." Unite all the dispensaries for the poor in the city of Denver in one building in a central position, divide the work among the schools or among those now in dispensary work, exercise a rigid supervision over the applicants for relief so that none but deserving poor persons shall be treated and the problem is solved.

There should, and in all probability would be little difficulty in securing the co-operation of the teaching force of the medical colleges of Denver for such union, as the advantages are so apparent, and the disadvantages so few and so easily overcome.

There are medical men in this city who believe, no doubt, that it can make no difference to them who, or how many patients go to the dispensaries for relief, but even if this could be shown to be true there are many others who are directly and seriously injured by the resort to the dispensaries of patients who can and should pay for the medical services they receive, and in the interest of our fellows we should regulate, supervise and rigidly examine into the merits of each case treated free. The pauperizing and degrading influence of gratuitous work for those who are able to pay for ser-

vices is deplorable and the physicians of Denver should no longer be a party to it.

No body of men aid their fellows as freely, as cheerfully and at such great personal sacrifice as physicians, not even the "men of mercy," the ministers; and no body of men are so poorly and grudgingly paid. It is unnecessary, unfair and unprofessional to treat those who are able to pay a fair fee, without the exaction of that fee.

Let some steps be taken at once for the reorganization of our free dispensaries for the poor, let them be blended into one strong, good, well managed organization, and above all let them be FOR THE POOR, AND FOR THEM ONLY!

† † †

The American Medical Association in Denver in 1898.

Denver is a great convention city. It has entertained in a manner above reproach many of the largest national gatherings in the United States within the last five years. It is therefore a matter of some surprise that the American Medical Association has not before this been invited to hold its annual meeting here.

There are many reasons why such an invitation should be extended now, and accepted by the Association. The present will make three successive meetings held in Eastern cities. 1898 will be a Western meeting. The Far West had the meeting in 1894 at San Francisco; the Middle West has had it a number of times in recent years; Chicago, St. Louis and Milwaukee have all had it. The Association has never yet met in Denver.

If there is one region of the whole country more than another which should be visited by the members it is this state. The greatest climatic resort of the world has some reason for asking that the members of the medical profession shall visit here, and by personal observation get a true idea of our local conditions. After all has been said in regard to the other advantages of Colorado, the simple fact remains that our climate is our greatest and most abiding resource, and we must have those here whose advocacy of it will redound to our future benefit, and to the benefit of those who come as patients.

Denver will prove a royal hostess to the Association if it accepts our invitation. We can promise the members a welcome that will be more hearty, enthusiastic and sincere than is usually accorded to meetings of scientific bodies. We will give them the glad hand and the warm heart. The American Medical Association must meet in Denver in 1898.

Defunct Medical Bill.

History repeats itself as regards an advanced medical bill for Colorado. After being successfully steered through the house of representatives and carried to the senate, the medical bill failed to "bob up serenely." The osteopaths got their bill through, Mr. Lewis got his morphine law enacted, the dentists had their measure passed, but the medical bill had to give place to the charter bill, and a thousand and one other bills. In the past the board of medical examiners have had more or less charge of the bill and we have heard it whispered that they did not want a new law. This year, however, a vigorous committee from the State Society engineered the bill, but as usual disappointment is the result.

In our opinion, a new medical bill can be passed in only one of two ways; either by raising a sufficient amount of money to put it through, just as most legislative bills are put through, or by going into the canvas early and getting personal pledges from candidates in support of the bill. The first method we regard as dishonorable and this Journal will ever protest against its adoption. The second means an endless amount of detail work and bother, but it means success in the end. Whenever the name of a citizen is brought forward for a legislative position, let a committee from the local medical society visit him and, if possible, have the candidate pledge himself to support and assist in carrying through a creditable medical bill. Enough pledges can be secured to get a bill before the house and passed over adverse competition.

For the present the old law must stand. The osteopathic bill failed to receive Governor Adams' signature, and Colorado has not that shame to its credit. All honor to a governor who is something more than a figure head.

† † †

The St. Louis Plan.

There has been organized in St. Louis a hospital association which advertises to give medical advice, medicines and a bed in its hospital to all members of the association who will pay 50 cents per month. Its advertising circular says:

"This association contracts to give you the advice of eminent and able physicians and surgeons when needed, all the medicines you may require for any ailment you may have, or when you are ill or meet with an accident to admit you at a first class hospital, where you will be carefully attended and cared for. The association offers, in addition to medical and surgical advice and medicine, to provide you with bed, board, and educated and trained nurses, who will give you the most careful attention, and who will see that the medicines prescribed by the physicians are given just

as directed by him and will also render those little attentions so necessary to the sick and injured. You are offered all these advantages for the small sum of 50 cents per month, with the assurance that there is positively no extra charge for anything you may require."

We have positive assurance that a similar association is being worked up in Denver. We sincerely hope that none of the reputable and eminent physicians of Denver will be mixed up with such a debasing affair. The best time to stop such commercialism is just before it begins.

Medical College Commencements.

Three of the four medical colleges in Denver have had their commencement exercises this month, and have graduated a sum total of 37 students.

The Homeopathic College held their closing exercises April 2nd, the first of all the schools. A preponderance of lady graduates in that class gave it especial notoriety. The five brave men who battled so bravely with such odds against them will probably find their life's struggle some easier for having had this unusually hard schooling. Jessie B. Connett, Fannie E. Cooper, Alvira J. Cardwell, James F. Darling, Walter J. King, Frank E. McCurtain, Marie Nordlund, Floyd J. Nutting, Lillian I. Pollock, Eugenian J. Reinhardt, Jessie R. Tennant and Pearl B. Wheeler made up the class, who listened to an address made them by Mr. George Richmond. Dr. S. S. Smythe presented the diplomas and Dr. C. E. Tennant, Jr., was presented with an *ad eundem* degree.

The Gross Medical College graduated a class of 16, "'alf and 'alf" as regards sex. The exercises were held April 8th, at the Central Presbyterian church. Addresses by Revs. Vosburgh and Bayley and the conferring of the degrees by Dr. W. H. Buchtel, president of the board of trustees, interspersed with fine music, made a delightful programme. The graduates were: Lenora M. Benton, Adeline K. Bliven, Jennie S. Bowen, Emma J. Keen, Ellen M. Keene, Alice M. Moore, Lucretia Nelson, Anna M. Rae, Sherman T. Brown, Clarence E. Bulette, John Cohn, Norman L. Harris, Edward H. Katterhenry, James R. Mahon, Sumner Paine, George W. Sims.

The Medical Department of the University of Denver graduated a class of nine gentlemen on Tuesday evening, April 13th, at Trinity M. E. church. Orchestra and chorus music was given throughout the programme, which consisted of addresses by Dr. Axtell and Rev. Cobern, after which Chancellor McDowell pre-

sented the diplomas. The dental department of the University of Denver was represented on the programme by Dr. J. M. Porter, who talked to the young dentists in a very happy vein. The young disciples of Esculapius now holding diplomas from this college dated April 13, 1897, are: Edward F. Dean, Henry H. Harvey, Arthur J. Holmquist, Henry H. Nast, Edmund F. Noyes, Moses Sahud, Marion F. Setters, Ira R. Woodward, Warren Woodruff.

In December, 1896, the Pennsylvania Board of Medical Examiners examined eighty-eight applicants for license to practice. Of this number five were women and eighty-three men. On the first day one applicant was expelled for copying. Of the eighty-seven taking the examination, twenty-nine failed to pass, or about 38%. We should judge that Pennsylvania has a board of medical examiners that the profession of that state would do well to continue. Their example might be profitably followed by many other boards.

Drs. Hershey and Macphatter gave a delightful dinner party to some of their professional friends on the evening of April 15th at their elegant new home on 13th and Sherman Avenues. In connection with their home they have a private hospital which is as completely equipped as any of our city hospitals. Those who enjoyed the treat were: Drs. McNaught, Bonney, Hopkins, Hall, Birdsall and Axtell.

Dr. T. H. Hawkins was quite a fop,
When someone took him for a long-whiskered "Pop."
Now the only way for him to know
Which is the way the wind doth blow,
Is for a straw in his inside pocket,
For that Populist beard he had to dock it.

Dr. Horace Burns, of Louisville, Colo., was in Denver in March.

Book Reviews.

PRINCIPLES OR GUIDES FOR A BETTER SELECTION OR CLASSIFICATION OF CONSUMPTIVES AMENABLE TO HIGH ALTITUDE TREATMENT AND TO THE SELECTION OF PATIENTS WHO MAY BE MORE SUCCESSFULLY TREATED IN THE ENVIRONMENT TO WHICH THEY WERE ACCUSTOMED PREVIOUS TO THEIR ILLNESS.—By A. Edgar Tussey, M. D. Philadelphia: P. Blakiston, Son & Co. Cloth, Price \$1.50.

When this book came into our hands we recognized in it a book that would interest the physicians of the "high west." Our impression was that a Colorado man was the man who ought to have written the book and, even after reading the book, our impression

has not materially changed. Dr. Tussey's style is heavy and his verbiage profuse. His division of subjects is poorly arranged and his conclusions are so scattered that they will be of limited value. Yet the book has some ripe experiences which cannot fail to be of service to physicians with pulmonary cases to treat.

He calls attention to the fact that a removal to a high altitude is frequently attended by a complete change in the habits of the individual, which if made in a low altitude would result in recovery. This assertion is made with more force by Dr. Tussey than it deserves and, as he puts it, it is misleading. Probably the part of most interest to us in Colorado, is the part entitled "High Altitude Effects." He attributes all the value of high altitude to an increased vital capacity. He says nothing of the dryness of atmosphere, of the stimulating properties of rarefied air, of the increased amount of sunshine, which are part and parcel of high altitudes. He asserts that cases of tubercular laryngitis ought to remain at home, and this in the face of the fact that Colorado prolongs the life of many of these cases, which fact ought to have been known to Dr. Tussey. Cases with heart disease he recommends to be kept away from high altitudes. Mitral stenosis he regards as very serious cases to send to high altitudes.

Other headings in his book are alcoholism, specific tuberculosis (by which he means syphilis and tuberculosis combined), pelvic inflammations, temperament, hemorrhages. A basic involvement, he maintains, will clear up or become latent when an apical involvement of the same extent will either not clear up or go on the stage of cavitation before its arrest is accomplished. To our mind, the following from his resume is the best and clearest cut of any portion of the book: "Under a proper plan of treatment there is no such a thing as negation of results. I have seen much to impress me with the importance of a wise course of management, even when the case has the seal of death firmly engraved upon it. I have seen medical remedies withdrawn on the ground that the case was hopeless and treatment useless. From so unwise a conclusion I have noticed a sudden and rapid extension of the malady. * * * The proper application of all treatment is relative and positive. It is impossible for it to be negative; negative it cannot be, it must be of necessity either injurious or beneficial."

It is advice of this kind that we often need. The book will prove helpful, but will never be a popular treatise, and in fact has no right to be, as it is misleading in regard to the effect of high altitude upon consumption. Its whole tenor is to discourage the more general adoption of high altitude and climatic treatment. The right book is yet to come.

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Original Communications.

GASTRIC ULCER.—PROBABLY TUBERCULAR.—REPORT OF A CASE. *

By NORMAN W. BELLROSE, M. D.,
Eaton, Colo.

Gastric ulcer in its various forms belongs to a department of medicine which has received a great deal of attention of late years. I consider it a very important subject, and one that should not be overlooked by the general practitioner. I believe it to be a disease that is far more frequent than is generally supposed, and that many cases of gastric ulcer are unrecognized; therefore, are treated as some other disease of the stomach, perhaps of much less importance.

Dr. Deale (*Maryland Medical Journal*) has this to say of gastric ulcer; "It was a surprising revelation to me that numerous autopsies have shown it to be present, either in the fresh state, or as healed cicatrices, in from two to five per cent. of deaths from all causes, and it is only fair to add that the proportion approximates nearer the latter (five per cent.) than the former."

It is not my intention in this paper to enter very largely into details. I will leave them for you to look up in your text-books which I am sure will be more complete and of greater value to you than anything that I might say in that direction.

Welch says: "Without a doubt the most obscure chapter in the history of gastric ulcer is that relating to its origin and to its persistency." It is a disease that is found in all stations in life and at all ages, but usually in persons of the following occupations: Shoe makers, tailors, weavers, potters, glass and metal workers, needle women, maid servants and cooks.

Pressure upon the pit of the stomach—as tight fitting corsets—

* Read before the Weld County Medical Society in the fall of 1896.

chlorosis and anemia are said to predispose to it, I question the correctness of the latter theory, however, as it is found in plethoric persons as well. Excessive indulgence in alcoholic stimulants, indigestible food and imperfect mastication, are also said to be causes of it. In 607 cases of open ulcer, collected from hospital statistics of post-mortem material, the ages were as follows:

AGE.	1 to 10	10 to 20	20 to 30	30 to 40	40 to 50	50 to 60	60 to 70	70 to 80	80 to 90	90 to 100	Over 100
NO. of CASES.	1	32	119	107	114	108	84	35	6	0	1

From this table it is apparent that three-fourths of the cases are found between the ages of 20 and 60, and that cases are distributed between three and four decades. The largest number of cases are found between the ages of 20 and 30. I might quote further, but think the foregoing table sufficient to show the relative frequency of gastric ulcer at different ages. In 1,699 case collected from various hospital statistics and examined post-mortem, 692, or 40 per cent., were in males, and 1,007, or 60 per cent., were in females. The results of this analysis makes the ratio two males to three females. The average age, however, at which gastric ulcer develops is somewhat higher in the male than in the female.

The great diversity of symptoms in different cases makes it impossible to give a generally applicable description of the course of simple gastric ulcer. It is, however, useful to designate the main clinical forms of the disease; thus we may distinguish:

1. The latent ulcers with entire absence of symptoms and revealed as open ulcers or as cicatrices at the autopsy.
2. Acute perforating ulcers with or without a period of brief gastric disturbance, when perforation occurs and causes speedy death.
3. Acute hemorrhagic form, where after a latent or brief course of the ulcer, profuse gastrorrhagia occurs, which may terminate fatally or be followed by the symptoms of chronic ulcer.
4. Gastralgic dyspeptic form, which is said to be the commonest form of gastric ulcer. Gastralgia, dyspepsia and vomiting are the principal symptoms. Sometimes one of them predominates greatly over the others, so that Lebert distinguishes separately a gastralgic, dyspeptic and a vomitive form. Gastralgia seems to be the most prominent symptom.
5. In the chronic hemorrhagic form, hæmatemesis is a marked symptom, and occurs usually in combination with some of the symptoms of the gastralgic dyspeptic form.

We have also a cachectic, recurrent and stenotic form, which I will not dwell upon. Welch has this to say of syphilitic ulcers of the stomach: "They have been described, but without sufficient proof as to their being syphilitic in origin." He also states that necrotic ulcers probably microtic in origin, may be found in the stomach in cases of splenic fever, erysipelas and pyæmic, etc. I have been unable to find but very little in the text-books bearing upon the tubercular form of gastric ulcer. Why it is so is beyond my comprehension, unless it is as Flint, Welch and others have said, that cases of tubercular ulceration of the stomach are so rare that they are hardly worth mentioning. It is because of this rarity that I make a report of the following case:

Miss W., aged 31, height 5 feet 4 inches, weight 110 pounds, complexion fair, bones large, cheek bones high and prominent, fairly well nourished, gives a scrofulous history. Born in Canada, Province of Quebec, where she lived until 8 years ago, when she came to Colorado. Her mother died of pulmonary tuberculosis at 41 years of age. Father living, aged 66, but in poor health. Four aunts and one uncle—on father's side—died of scrofula, probably tuberculous, at ages ranging from 30 to 50 years. All had more or less cough and expectoration. Two of the aunts had stomach trouble. The mother had one brother who died of consumption. The grandfather on the mother's side died of consumption at 55. The grandmother suffered from some stomach trouble from the time she was 20, which was said to have been the cause of her death. One brother died of tubercular meningitis at 4 years of age. She has 4 brothers living, with whom I am personally acquainted, and I know them to have the scrofulous diathesis. Three of them are living in Colorado. The eldest came to Colorado 12 years ago for lung trouble, probably of a tubercular nature. At the time of his arrival he was coughing and expectorating a great deal; was greatly emaciated and very weak. The disease has since become arrested, but still some cough and expectoration remains. The other two are in fair health. The fourth brother—and the youngest—came to Colorado about three years ago. While here he was treated by a Greeley, Colo., physician for some affection of the bladder. He remained in Colorado for about a year, then returned to Montreal, Canada, and there entered the Victoria General Hospital, where he was treated for tubercular ulceration of the urinary bladder:

Patient's personal history is as follows: As an infant she was very delicate. When four years of age she had gastro-enteritis(?), which seemed to leave the stomach and bowels in a very weakened condition. Menses appeared at fourteen years of age, and have been fairly regular up to the present time. She enjoyed fair health until

the year before she came to Colorado, at which time she suffered from a mild attack of diphtheria, but from which she made a good recovery. She then did needle work for about three months. Soon after she began to suffer from a "heavy weight" in the stomach, and cold creeping sensations, which started from a point between the shoulder blades and which radiated downwards, and which were usually worse in the evening. The chills alarmed her somewhat as her mother had been affected in the same way while suffering from phthisis, therefore she thought she was developing the same disease, and particularly as she had at this time some cough and darting pains through the lungs, although she had no expectoration. In addition to the "heavy weight" in the stomach she now had constant pain, which was localized to one particular spot, but at times would extend through to a point beneath the left scapula. Vomiting gave some relief; constipation was the rule. About eight weeks before starting for Colorado she developed a throbbing sensation at the seat of pain, which continued for a few days when she felt "something burst" in the stomach at a point which corresponded to the pain. This was immediately followed by vomiting. Vomited matter consisted of mucous and pus; no blood.

She has been a sufferer from periodical attacks of headache ever since puberty. They have been more severe in the past four years. These attacks have always been accompanied by vomiting and some elevation of temperature. They usually last about 48 hours. At such times she abstains from food of all kinds. In three of these attacks she vomited a small quantity of blood.

The foregoing history is as she gave it up to the time she first consulted me in July, 1894. She had some hyperacidity at this time, but it has never been a prominent symptom. Can not eat or drink anything sour, as it intensifies the pain. Pressure over stomach extremely painful. The most tender point was found a little to the left of xiphoid cartilage over the seat of pain. She described the pain as constant and compared it to a "jumping toothache," and growing worse after meals; cannot yet eat meat, only in very small quantities; lives mostly on bread and butter, milk, oatmeal, soft boiled eggs and potatoes. She has found out by repeated trials what agrees with her best; has never been able to eat fats. My examination, late in July, 1894, did not reveal the presence of a tumor in the epigastric region; history now of a fairly good appetite, but fear of the attendant pain causes her to neglect her meals. Her temperature at this time was $99\frac{1}{2}$, pulse 90, and quite regular, slight cough, no expectoration, face somewhat flushed, lips of good color, bowels constipated. I pronounced the case

one of ulceration of the stomach, probably of tubercular origin. A microscopical examination of pus was not made.

I did not change diet; gave her, however, small doses of sal Rochelle in $\frac{1}{4}$ -glass of water one hour before breakfast; also gave a mixture of salol, bismuth sub-nitrate, listerine and fluid extract of golden seal colorless in water, a teaspoonful well diluted with water one hour before meals and at bed time, with instructions to return in a week, which she did. The pain in the stomach was then some better, but she complained of a throbbing at the seat of pain, which annoyed her greatly, for which I gave her 10-drop doses of Squibb's fluid extract of ergot three times a day, in water; also a 4-ounce bottle of Fellows' compound syrup hypophosphites, a teaspoonful in a little cold water immediately after meals. She did not consult me again until October 25, 1895. At this time she complained of great pain and throbbing in the stomach, with some hyperacidity. I again gave the bismuth mixture and ergot as before. Next morning about 4 o'clock I was sent for. The messenger informed me that she was bleeding to death. I found my patient in bed, and bloodless or nearly so. There was a large pool of blood on the floor, another in the bed, with a wash bowl and a vessel partly filled. In all, perhaps about seven pints of blood and other fluids had been vomited and evacuated by the bowels. Her pulse was rapid and feeble, hands and feet were cold and she could not talk above a whisper. Any attempt to move caused nausea and vomiting and other symptoms usual when there is great loss of blood. I at once removed the pillows from under her head and raised the foot of the bed about 10 inches. Placed hot water bottles to her feet and other parts of the body, and gave 15 grains of ergot hypodermically. Small pieces of ice every few minutes were allowed, and a little later a capsule of tannin, opium and bismuth was given. She vomited some blood from time to time for about four hours, when the hemorrhage ceased. After the first day she vomited one-half to one teaspoonful of pus every day for four days, when nausea and vomiting ceased altogether. Some elevation of temperature remained; 102° F, was, however, the highest recorded. I suggested rectal alimentation, but this was objected to, so I gave her one ounce of milk, one-half ounce of aqua calcis, every two hours, and finally increased this to four ounces (one-fourth aqua calcis, with one teaspoonful of bovine, which was gradually increased to one tablespoonful) and allowed nothing else for two weeks. I kept her in bed without pillows, then allowed pillows to be placed under her head and the foot of the bed lowered. In the third week she was allowed to sit up. At this time her diet consisted of oatmeal gruel and milk, soft boiled eggs, crackers and chopped beef,

broiled. I did not see the case again after the third week. The bovine was continued from time to time, for about three months.

On my second visit after the profuse hemorrhage the nurse informed me that when emptying the blood out of the wash bowl she found several small "lumps," about the size of peas, and that she had crushed one of them with a stick and it was filled with a cheesy substance. This, in my opinion, was a tuberculous, degenerated portion of the stomach wall, with probably some of the superficial lymphatic glands. At present, nearly one year later, she is feeling about as well as is usual for her. She is still dieting; has periodical headaches, with vomiting; throbbing in stomach at times. She can not see but what she feels about the same as she did a short time before the attack of hemorrhage. She told me that she felt better for three months after the hemorrhage than she had felt for five or six years. She has not taken any treatment that I know of, with the exception of salol, resorcline and bismuth mixture, which she got about three weeks ago.

I believe that in gastric ulcer, of tubercular origin, that we have first, a degeneration of one or more of the lymphatic glands in the walls of the stomach; second, arrested nutrition; third, destruction of tissue by the gastric juice; and fourth, as in this case, rupture of the gland or glands, with or without hemorrhage, with liberation of pus, or caseous matter, as the case may be.

Welch has this to say of tuberculous ulcers of the stomach: "Although miliary tubercles in the wall of the stomach are more frequent than is generally supposed, genuine tuberculous ulcers of the stomach are not common."

Tuberculous gastric ulcers generally produce no symptoms, but they have been known to cause perforation of the stomach and hematemesis. Cheesy tubercles, as large as a pea, both ulcerated and non-ulcerated, have been found in the stomach, but they are very rare."

A little work, a little play
To keep us going—and so, good-day!
A little warmth, a little light
Of love's bestowing—and so, good- night!
A little fun to match the sorrow
Of each day's growing—and so good-morrow!
A little trust that when we die
We reap our sowing! And so, good-bye!

There was a man in our town
Invested all his health,
With madly avaricious aim,
To win the goal of wealth;

And when he had his wealth attained,
With all his might and main,
He vainly lavished all his wealth
To get his health again.

—*Richmond Dispatch.*

MILK AS A FOOD, THE FERMENTATIONS TO WHICH IT IS LIABLE AND THE VALUE OF PASTEURIZATION.

By ROBT MEADE SMITH, A.M., M.D.,
Colorado Springs, Colo.

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Fellow of the American Physiological Society; of the American Soci-
ety of Naturalists; Associe Etranger de la Societe Fran-
caise d' Hygiene, Etc., Etc.*

[Concluded.]

Of course, it is desirable that the milk for infant food should be free from bacteria, but if the process of destruction of the germs also destroys the nutritive value of the milk it is evident nothing is gained. One of the effects of boiling milk is to coagulate the lactalbumin, and a soluble, readily digestible proteid becomes insoluble and difficult of digestion. It is to this change that the peculiar taste of boiled milk is supposed to be due. Again, under the influence of steaming profound changes occur in the milk sugar, recognized by the brownish color of sterilized milk, which in all probability is due to the caramelization of the sugar.

But more important still the effect of boiling is largely to destroy the form of emulsion in which fat is present in fresh milk and thus greatly reduce its digestibility. Finally, sterilization renders the casein less readily precipitated by rennet (the ferment of the gastric juice) and actual experiment has proved that even when so precipitated it is more resisting to the digestive action of pepsin and trypsin, the proteolytic ferments of the stomach and pancreas.

Renk found that when sterilized milk was kept the fat globules unite to form large drops of fat, and when milk is warmed they collect at the surface and after once passing from a state of emulsion cannot again be made to unite by heating or shaking. This greatly detracts from its digestibility, especially by infants, for he has found that the digestibility of milk by infants is inversely to the size of the fat globules, an explanation of why Jersey milk may be difficult to digest, since in Jersey milk the fat globules are largest.

Ellenberger and Hoffmeister have found casein to be changed in sterilized milk; there is no formation of cheese in the stomach and the action of the gastric acids and lactic acid ferment is incomplete. The precipitated mass is fine, floccular, light and not sticky, and therefore too soon passes out of the stomach. In the intestines also it does not coagulate like fresh milk and passes through too rapidly to be properly digested and absorbed.

Stutzer has also found cooked milk less digestible than fresh milk

uncooked, in fractional digestion experiments made with artificial gastric juice, using milk sterilized by Soxhlets' process. Raudnitz has reached the same conclusion from experiments made on dogs. He has found that when dogs are fed upon boiled milk they absorb one-fourth less nitrogen (an index of the absorption of albumen) and one-fourth less fat than when fed on raw milk, and Vasilief has confirmed these results from experiments made on men. He found especially that a large percentage of the milk fat passed through the body without being absorbed. So also in comparing the artificial digestion of raw and sterilized milk Leeds found that the indigestible residue, both from peptic and pancreatic digestion, was much greater from sterilized milk than from raw milk, and that sterilization greatly retarded both the rate and degree of digestion. The clinging of the undigested residue to the fat globules of the sterilized milk was a prominent feature in explaining the diminished digestibility.

The effects of sterilization are, then, to destroy and coagulate the starch ferment, to coagulate a portion of the lactalbumin and to so modify the casein that, while it is not coagulated by the heating it becomes less readily coagulated by rennet and is only imperfectly digested by pepsin and pancreatin. The fat globules, also, are more or less broken up by the heat, and the coagulated proteids tend to attach themselves to the fat and help to explain the diminished assimilation of fat which has been noted in cases of infants fed on sterilized milk. Finally, the milk sugar is completely destroyed by prolonged heating, and is more or less affected even in ordinary sterilization, the degree depending upon the degree and duration of heating.

We are thus able to explain the clinical results observed by Dr. Davis, and conclude that while sterilized milk may be of great value in allaying acute intestinal troubles, it must be regarded as a medicament and not as a food.

When, however, we contrast the temperatures at which these chemical changes occur in milk and the temperatures which prove fatal to the organisms most commonly found in milk, we at once find that it is possible to destroy all bacterial danger in milk and at the same time preserve its value as a food.

Thus we find that all the changes which render boiled milk so different from raw milk occur at a temperature above 158° F. The milk sugar does not appear to be altered at a temperature below the boiling point, while the proteids and fat only commence to change at 158° F. Below this point no chemical changes of any importance occur. Milk heated to 155° F. does not acquire the taste of boiled milk and in all physical and chemical respects behaves like raw milk. But when we examine the result of this temperature on the bacteria of milk

we find nearly all the good effects claimed for the boiling temperature without its drawbacks.

Thus typhoid fever germs are killed at 136.5° F., vaccine at 140° F., pneumonia germs at 131° F., and the tuberculosis germ at 155° F., provided this temperature is kept up for twenty minutes, while a much shorter duration of heating suffices for all the other pathogenic and non-pathogenic bacteria. Bitter found that tubercle bacilli were killed by heating for thirty minutes to 154° F., while Forster obtained the same result by heating for ten minutes at 158° , for five minutes at 170° F., and for one minute at 203° F. At lower temperatures more time is required, viz., one hour at 140° F., and four hours at 131° F.

The value of the process by which fermentable fluids are rendered largely free from germs by means of heat where the temperatures employed range considerably below the boiling point was first pointed out by Pasteur in 1868, in combating the various fermentations which are apt to occur in beer and wines; but its importance in increasing the keeping qualities of milk and freeing it from disease germs was not generally recognized until a few years ago.

To this process the name of Pasteurization has been given and may be defined as the rapid heating of milk to 155° F. the maintenance of this temperature for at least twenty minutes and the rapid cooling to at least 50° F., without exposure to the dust-laden atmosphere and the preservation in sealed vessels of the milk so treated at a temperature of at most 40° F. This process should not be confounded with the so-called "*sterilization*" of milk which we have found to consist in the employment of the boiling temperature, a process whose advantages we have already considered, the chief of which is the loss of nutritive value which it entails; while further, even when so treated, the milk is not actually sterile. The term sterilization is therefore a misnomer. When we contrast the characters of Pasteurized and so-called sterilized milk, we find that the former possesses all the practical advantages claimed for the latter without its disadvantages.

In the first place, Pasteurized milk is free from the scorched taste of sterilized milk, as the maximum temperature to which it is raised is below that at which the changes in albuminoids, which produce this flavor, occur. As a consequence the proteids of Pasteurized milk have not lost the digestibility of the same bodies in fresh milk. So, also, no change occurs in the lactose at the maximum Pasteurizing temperature, and Pasteurized milk is free from the brown discoloration of boiled milk. On the fats the influence of the Pasteurizing temperature is also much less marked, for while the process seemed to delay and partially prevent the rising of cream in milk so treated, this may perhaps be regarded as an advantage where it is desired to use the whole

milk as food. For, as is well known, when the cream has once risen on milk it is very difficult even by prolonged shaking to again distribute the cream uniformly through the milk. So that in feeding to infants, if the milk has stood sufficiently long to raise the cream there is great danger of at one time feeding almost pure cream (a method which on all physiological grounds is to be condemned) and at another time skim-milk.

Therefore as regards both its physical and chemical attributes, pasteurized milk is perfectly comparable with fresh sweet milk. It however possesses advantages even over the best fresh raw milk; for the method of heating, as has been seen, not only destroys all the specific disease bearing germs which might be present in milk, but it also destroys those bacteria which are able to produce toxic or poisonous bye-products when taken into the susceptible alimentary tract of the infant and which are so prolific of gastric and intestinal disturbances in infants, especially during the heat of summer.

Finally the lactic-acid producing bacteria are destroyed by pasteurization and as a consequence pasteurized milk will keep sweet for days or even weeks when kept at 50° F.

It may seem to many on first thought that the importance of using sterile milk is greatly exaggerated, as our forefathers never dreamed of its necessity and seemed to thrive on raw milk. To-day, however, the conditions are largely different; more children are artificially reared and there is no question but that there is a greater danger to-day in using raw milk than formerly. It is a simple matter, comparatively, to supply a small community with moderately pure milk, but the crowding of large communities in a restricted district makes the inhabitants more prone to disease and the supply of pure milk more difficult, as a greater time must elapse between the milking and consumption of the milk. Moreover, it is only recently that physicians have recognized in impure milk a source of disease. To-day, therefore, the danger is greater than formerly and educated people are gradually recognizing it.

"It is a curious fact that while older people are chiefly fed on sterilized, *i. e.*, cooked food, infants are fed on food peculiarly adapted by its composition and fluid state to offer a home for bacteria."

The value of Pasteurization has been abundantly demonstrated by the philanthropic efforts of Mr. Nathan Straus in the practically free distribution among the poor of New York City of bottles of Pasteurized milk. He has published statistics in the *Forum* for November, 1894, which show that the infant mortality in New York in July, August and September, 1894, decreased 8.5, 7.5 and 18 per cent. respectively, as compared with the corresponding periods of the preced-

ing year, even though the first quarter of 1894 showed an increase of 10 per cent. in the infant mortality over 1893. It was not until the second quarter of 1894, and then only for the last forty days, that the distribution of Pasteurized milk was commenced, and in this quarter the increase of infant mortality was 3 per cent. as contrasted with 1893. The summer of 1894 was a much more trying one for children than 1893, all the external conditions of hygiene were the same, the increase of population would have called for at least a 3 per cent. increase in infant mortality and yet we find an actual decrease of 10 per cent. in the summer mortality. Further analysis of Mr. Straus' figures show results even more striking and offer strong substantiation of his claims that much of this diminished mortality is due to the establishment of pure milk depots, and that "in the near future it will be regarded as a piece of criminal neglect to feed young children on milk which has not been sterilized."

Various forms of apparatus have been devised for Pasteurizing milk on a large scale, nearly all of which fail in some essential point, since most were constructed from the point of view of the dairyman and not of the bacteriologist. Two main types of construction may be recognized: In one there is a continuous flow over a corrugated metal surface heated by the direct application of steam or hot water to the lower surface. By this method it is impossible to hold the milk at the desired temperature for any length of time, and we have seen the element of time is an important factor in destroying germs. Further, the milk is not heated uniformly throughout, the layers of milk in contact with the heating surface are apt to be overheated and scorched, while there can be no certainty that the superficial layers are heated sufficiently high to kill the germs in them.

The other class of apparatus consists of a reservoir in which the milk is heated either by steam or hot water with either an intermittent or continuous in and out flow. In all forms where there is continuous flow even into a closed reservoir it is inevitable that different portions of the milk will be heated to different degrees and for unequal lengths of time; while in some types the inflowing un-Pasteurized milk is even mixed with the heated milk, and examination of the Pasteurized product from most forms of apparatus show either that the method has not been effective in destroying bacteria; or else the temperature had been allowed to rise too high, as shown in the decided scorched taste.

Only in an intermittent apparatus can the questions of temperature and time be entirely under control, and only under these conditions is efficient and thorough Pasteurization possible. I have adopted in the Broadmoor Dairy the form of apparatus described by Prof. Rus-

sel as the most efficient in operation, the easiest to clean and sterilize, the simplest in construction and the safest from reinfection.

This apparatus consists of an inner tin chamber, the milk reservoir, surrounded by a wooden vat or water jacket, having both steam and cold water connections, both vats having removable covers. In order to heat or cool the milk rapidly and uniformly, it is necessary to agitate the fluid in the inner chamber so as to bring every particle in contact with the heating or cooling surface. This constant stirring of the milk in the inner chamber and hot or cold water in the outer vat is accomplished by paddles moved backwards and forwards by machinery run by steam power.

It is recommended by some to first separate the milk and then combine the skim and cream before Pasteurizing. Separation undoubtedly leaves in the separator bowl the great part of the solid matter with which the milk may be contaminated and enormous numbers of spores which would not be destroyed by Pasteurization. But on the other hand separation requires a temperature which is most favorable to germ growth and it is demonstrable that more will be gained by at once Pasteurizing the milk before any great multiplication has been possible rather than permit of abundant germ growth on the chance of removing part in separation. Of course, if the milk has been shipped some distance before the Pasteurizing process is commenced, then separation by all means is advisable. Niederstadt has, however, found that 75 per cent. of the bacteria present in milk and nearly all the tuberculosis germs pass into the cream when separated.

No milk having an acid reaction is in proper condition to be heated, because of the effect of acidity upon coagulation. Commercial milk has nearly always a more or less developed acidity, and should therefore always be first accurately neutralized before being Pasteurized, a process, however, which requires the services of a chemist. It is evident that Pasteurization of milk immediately after being drawn from the cow before acidity can develop is a great desideratum.

The milk fresh from the cow is placed in the inner reservoir, after the outer vat has been filled with water heated by steam to about 100° F., the covers placed in position, the steam turned on and the agitators started. Careful readings of the thermometer, in both the milk and water jacket, are made every minute, and as soon as the temperature of the hot water reaches 155° F. the steam should be turned off and it will now be found that the milk will also soon reach this temperature. As soon as this point has been reached it must be maintained strictly for twenty minutes, not being allowed to rise above or below this point. This is to be accomplished by the use of steam or cold water in the outer vat. When the milk has been for twenty min-

utes at 155° F. the hot water is run off from the outer vat and replaced by a stream of running cold water, the stirrers still being kept in motion. But as spring water is rarely below 50°, this will not alone serve to cool the milk sufficiently fast to prevent germination of spores which might happen to be present and which had resisted the temperature of 155°. Fortunately no germs of any dangerous nature can resist 155°, but the lactic acid spores will not be entirely destroyed by this heat and hence Pasteurized milk will not keep sweet indefinitely, but will ultimately sour. The length of time it may be kept depending not only on the number of germs originally present, but on the thoroughness of the heating and the rapidity of cooling, especially when below 70° F. for this is the temperature most favorable to the growth of these germs. I have specimens of milk which have kept perfectly sweet for ten days.

As soon as the milk is cooled to about 80° the water jacket should be emptied of the running water and filled with powdered ice and salt to make use of the heat taken from the milk and rendered latent in the conversion of the solid ice to a fluid state and the solution of the salt. The theoretical amount required to cool twenty pounds of milk 95° would be about fourteen pounds, but by first cooling the milk by water to about 80°, fifty gallons of milk would require about 400 pounds of ice to reduce the milk to 50° in less than half an hour.

It is quite as necessary that the bottles and cans that come in contact with the Pasteurized milk should be sterilized and kept germ free, as it is to kill the germs in the milk. For if Pasteurized milk is not handled in an aseptic manner, *i. e.*, so as to exclude all possible chance of subsequent contamination, all the advantages of the process are lost. It is therefore essential that all germs that could possibly be in cans or bottles should first be destroyed by heat. The process I employ is to first wash the bottles in warm water, then to have them scrubbed with a rotary brush in boiling soap suds, and then in clean hot water. The bottles are then placed, mouth downward, in a movable rack which is then run into an iron chamber, or sterilizing oven, with a tight fitting door and a valve at the top, and then filled with live steam. Bottles and strainers may be left in this sterilizer until needed without risk of contamination.

As soon as the milk reaches 50° it is drawn off into sterilized bottles through a brass outlet tube that is connected with the bottom of the milk chamber at one end, and which projects some inches beyond the outer wall of the wooden vat. This tube is provided with a stop-cock placed within the hot water chamber and operated by a long lever which reaches the top of the vat. This arrangement enables the milk to be shut off at a point where the temperature can be controlled,

while the construction and location of the tube and valve permit of ready cleansing and sterilizing by turning a jet of steam through the outlet just before using. As each bottle is filled it is sealed with a paper-pulp disk which is rendered sterile by boiling in white parafine. During the whole operation of filling, the parafine is kept boiling and as each cap is needed it is removed by sterilized forceps from the hot parafine, the excess allowed to drain off and then placed over the bottle's mouth, where it at once cools and hardens and seals the bottle hermetically. Finally the metal tops of the bottles are fastened with a lead seal, to prevent their being tampered with. The bottled milk is then stored in a refrigerator or in a tank filled with ice water.

When treated in the manner above described it has been estimated by Prof. Russel that 99.7 per cent. of the germ life in milk has been destroyed and the effect of stopping the putrefactive and fermentative changes of so much organic life cannot but be attended with beneficial results.

While the value of Pasteurization when properly done is of indisputable value, there is danger that the process may fall in to disrepute when undertaken by persons who do not appreciate the rationale of the process or are too ignorant or careless to attend to the numerous details which are essential: heating milk for some indefinite time to some uncertain temperature, cooling without any special precautions, preserving in unsealed unsterile vessels, is not Pasteurization. Heating milk in open vats or injecting steam into milk is not Pasteurization, while Pasteurized milk which is kept in non-sterile vessels, or vessels which are not sealed is only half done. If not properly performed, the attempt at Pasteurization may prove harmful instead of beneficial.

But to get the full value of the process, even after all the preceding details have been strictly attended to, much depends upon the way the milk is handled by the consumer. If the bottle is opened by the consumer before the milk is required and then not kept at a temperature of at least 50° F. reinfection will inevitably occur. Therefore the following precautions should always be carefully observed by the consumer:

1. Keep the bottle on ice until needed. Refuse bottles of which the seal is broken.
2. Do not open the bottle until the milk is required.
3. Shake the bottle well before opening, to mix the cream and milk.
4. Do not replace the paper disk after it has been removed, but replace the metal stopper and invert over the neck of the bottle a clean, dry tumbler to prevent anything from falling into the bottle.

5. Any unused milk should not be poured back into the original bottle.

6. After the bottle has been emptied, wash clean in warm water, and until returned keep in a refrigerator in an inverted position.

APRIL QUESTIONS OF STATE MEDICAL EXAMINERS.

The following questions were given the applicants coming up for examination before the Board of State Medical Examiners at their quarterly meeting in April of this year. Seven medical students presented themselves, and of this number five failed. Two days were given for the examination. The board passed favorably upon 29 applicants holding diplomas and certificates of ten years' practice:

PRACTICE OF MEDICINE.

1. What is an infectious disease, what a contagious disease and what evidence is essential to demonstrate that a disease is caused by a micro-organism? Give examples of diseases whose causative factor is and is not micro-organisms.

2. What is typhoid fever? What its common cause? Symptoms, pathological changes, complications, sequelæ, prognosis and treatment.

3. Make a differential diagnosis of variola, varioloid, measles, chicken pox. Describe stage of incubation, invasion and eruption and give varieties of each with prognosis, treatment and prophylaxis.

4. What is cerebro-spinal meningitis? Give its etiology, pathology, course, prognosis, sequelæ and treatment. From what should it be differentially diagnosed?

5. Discuss lobar pneumonia fully. How does it differ from catarrhal and interstitial pneumonia?

6. What is meant by hemo-pericardium, by pneumo-pericardium? Give causes, differential diagnosis and treatment of each.

7. Describe the different varieties of intestinal parasites. Give etiology, symptomatology and treatment.

8. What is interstitial hepatitis? Give its etiology, pathology, symptoms and treatment. How does it differ from acute yellow atrophy of same organ?

9. Make differential diagnosis in chronic parenchymatous and acute diffuse nephritis. In which is dropsy most frequently present? Why does dropsy occur?

10. What is paralysis? What is the difference between an anatomical and functional paralysis? Give examples of each, differentiating symptoms and signs.

SURGERY.

1. Describe in detail the antiseptic measures essential for operator and subject prior to a surgical operation.
2. What is the causation of pyæmia and septicæmia? Differentiate these diseases and give symptoms, signs, pathology and post-mortem appearances.
3. Describe briefly Thiersch's method of skin grafting.
4. What is myxœdema? Give its etiology and treatment.
5. What is a tumor? How are tumors divided? Name three kinds of typical connective tissue tumors, with special tissues involved. Name three varieties of malignant tumors and give their differential characteristics, visually and pathologically.
6. What are the symptoms and signs of fracture at base of skull and how do they differ when involving the anterior, middle and posterior fossæ?
7. What is a so-called "floating cartilage?" Give its symptoms and treatment.
8. Discuss club foot and describe talipes equinus, varus, valgus, and planus varieties. Which is most frequently met in practice and why?
9. Describe the different varieties of hip joint dislocations. Give symptoms, signs, mode of reducing each variety and after treatment.
10. Discuss appendicitis from a surgical standpoint in all its details so far as pathology, causation, symptoms, signs and treatment is concerned. Is any special technique or toilet necessary for operation?

OBSTETRICS.

1. What constitutes the external and internal female organs of generation? Briefly describe each, and give analogous organs in the male.
2. What is understood by ovulation, menstruation, viability, menopause, and what is the age when each begins? What effect has climate on same?
3. Describe the corpus luteum when pregnancy has and has not taken place.
4. State common causes of sterility in male and female.
5. Describe the changes which take place in the impregnated ovum from time of impregnation until full term.
6. What is the mesoblast, the hypoblast, and what is developed therefrom? Describe the foetal circulation.
7. What is placenta prævia? How frequently does it occur? Describe its symptoms, signs and source of hemorrhage and treatment.
8. Describe the term "labor." Describe the first, second and third stages and proper procedure in same when normal.

9. How many positions of the vertex are there? Name and describe each. Which is the most frequent, and why?

10. How may puerperal infection manifest itself? When does it usually take place, and how? What is the poison causing infection? What are the symptoms, and how treated?

PHYSIOLOGY.

1. What is the reaction of most of the fluids of the body? If there are exceptions, name them.

2. Of what does the circulatory apparatus consist?

3. What is the relative area of arteries, capillaries and veins?

4. In what manner does the pneumogastric nerve effect the heart? Where is a cardio-inhibitory centre located?

5. How is the heart nourished?

6. What is the composition of the atmosphere? How much carbonic acid does expired air contain, how much oxygen inspired, and what are the requirements for good ventilation? How many cubic feet of air per head is required in healthy sleeping quarters?

7. What is the action of ptyalin? How is it obtained? What is its action on starch, and on what other bodies in the human economy does it act? What kind of sugar is its resultant action, and what is formed as an intermediate product of its ferment's action?

8. What are the extreme limits of the body temperature found in life, and what peculiar conditions allow tolerance of remarkably high and low temperature consistent with life?

9. What is the special function of the spleen? What is a vascular organ? What other vascular organs than the spleen perform a special function?

10. Are the brain functions localized? How are the motor areas determined, how the sensory? And what, if any, evidences has pathology given you of same in your practice. Recite case.

CHEMISTRY.

1. What is the difference between physical and chemical action? Five examples of each.

2. What is analysis? What is synthesis?

3. Define cohesion, adhesion, polarity, repulsion.

4. Write chemical formulæ for Ferrrous Sulphate, Ferric Sulphate, Mercurous Chloride, Mercuric Chloride. What is the terminal of salt derived from acids terminating in *ic*? What from those in *ous*? Give examples of each.

5. When and by whom was oxygen discovered? Give its occurrence. How may it be prepared?

6. Give the physical and clinical properties of sulphur.

7. What are the physical and chemical properties of nitrogen? Mention some of its compounds.

8. What is the weight of pure air at 0° C. Is it a mixture or a chemical compound? Five proofs to sustain your answer.

9. Discuss CO and CO₂.

10. How does the Fahrenheit thermometric scale compare with the centigrade? How may one of these scales be converted into the other?

ANATOMY.

1. What is the number of bones in the human skeleton?

2. How many bones in the vertebral column? Describe the vertebral column as a whole and the atlas, axis, seventh cervical, sacrum and coccygeal vertebræ in detail. In what respects do the male and female sacra differ?

3. How many bones constitute the cranium? How many the face? Name each group.

4. Name the tarsal bones, their location and articulations?

5. Name and describe the ligaments connecting the occiput and axis.

6. Describe the common carotid arteries. Name the branches of the external carotid.

7. Describe the internal iliac artery and name its branches as far as the capsule of the hip joint.

8. What are the branches of the brachial plexus of nerves above and below the clavicle?

9. Describe the small intestines, their situation and division.

10. Give general position, weight and measurements of the liver.

THE TROPOMETER. *

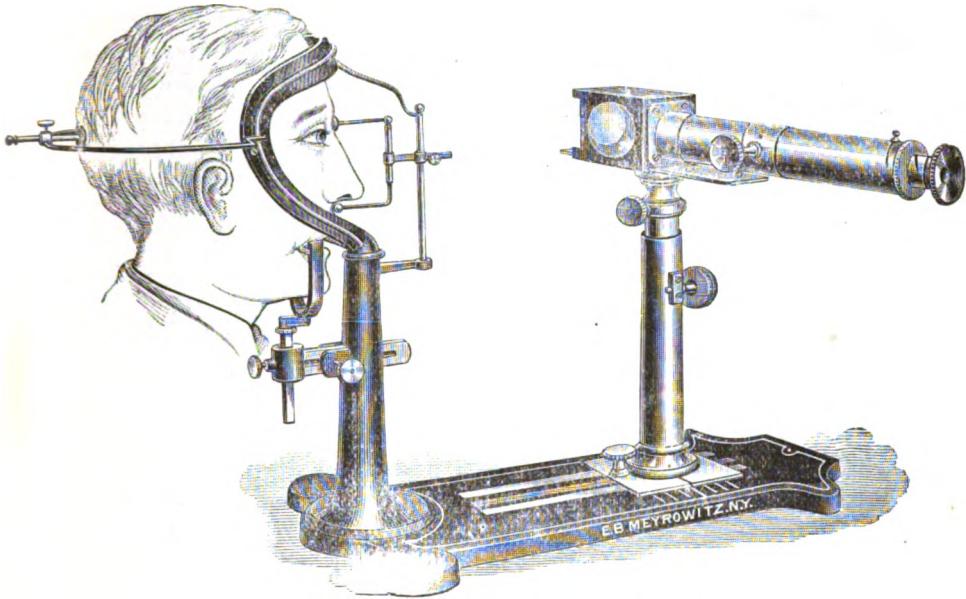
By G. MELVILLE BLACK, M. D.,
Denver, Colo.

The instrument you see before you was invented about two years ago by Dr. George D. Stevens, of New York. I have been using this instrument for about six months. I do not feel competent to offer more than a preliminary report upon it. What I have to say will pertain to its possible value and the uses to which it may be put. It should open a new field, if what Dr. Stevens claims for it is true.

We have been able to measure the rotation of the eyeball in all its directions by the perimeter, but this is a slow and laborious process which is open to many errors, because we must depend upon

* Read before the Pueblo County Medical Society, April 6, 1897.

the patient's answers for our findings. The tropometer does away with any answers on the part of the patient, and is therefore a purely objective test



You will observe that the patient's head is by comparatively simple means rigidly fixed in position before the instrument, and he is directed to look at this small spot in the center of this round glass window. Behind this window is a mirror, placed vertically, running at an angle of 45 degrees to the plane of the window. By looking in at the end of this tube the image of the eye is seen in this mirror. About an inch from the end of the tube is placed a scale which may be turned in any direction desired. By adjusting the scale and the cornea of the eye seen in the mirror, so that the cornea comes just between the two black lines at each end of the scale, its margins being slightly covered by the black lines, the patient is directed to look as far as possible in whatever direction the rotation of the globe is to be measured. The amount of rotation is read off on the scale by the position of the margin of the cornea. In a very few moments we can determine the limits of the globe's rotation. This gives us in a rough manner the strength of the individual muscles which operate to turn the eye in its various directions.

Dr. Stevens has advanced a new theory to explain the cause of esophoria and exophoria, that of excessive upward rotation of both eyes.

I will give you a practical example of how excessive upward rotation may cause esophoria and exophoria. I have here a rubber ball which is about the size of the globe of the human eye. You observe that there are attached to it two strings, one above and the other below the cornea. These strings represent the inferior and superior recti muscles, and are attached to this ball anterior to the central axis of rotation the same as in the human eye. I have here a piece of plaster-of-paris, which I have hollowed out to represent the orbit of the eye. Having placed the ball in this socket we will turn the globe slightly upward, likening it to a case in which nature failed to place the globe in the right plane. We must also presume that the fellow eye is in the same position. What is the result? The plane of the cornea is too high. If it were not for the action of the inferior recti muscles, the cornea would be so obscured by the upper lids that vision would be interfered with. The inferior recti muscles, however, pull the globes downward so that the cornea are in the correct plane. You will observe as I pull upon the inferior rectus muscle of this model, that I put the superior rectus muscle on the stretch, thereby increasing the tension of both these muscles. We will speak of it as *increased vertical tension*. You will observe as I continue to pull upon this inferior muscle that the globe moves downward, but that it also moves to one side. This lateral turning is caused by the increased vertical tension trying to correct itself by reducing the distance between the origin and insertion of the muscles so acting in its production. You remember that I called your attention to the fact that the eye muscles are attached *anterior to the axis of rotation*, hence the tendency of the globe to turn to one side when both vertical muscles are acting, providing the lateral muscles do not interpose. You observe that there are no lateral muscles on this model. If there were, I could prevent this lateral turning caused by the increased vertical tension, by bringing into action the muscle on the side opposite that toward which it now turns. If the lateral muscles can not overcome this lateral turning, we have esophoria or exophoria, according to which side the globe turns. We are all familiar with the symptoms of esophoria and exophoria, and we also know that oftentimes the correction of the esophoria or exophoria by tenotomy or prisms does not relieve the patient, and in consequence we are at a loss to know what more to do.

Is it not possible that the excessive upward rotation, which is overcome by the inferior recti pulling the globes downward, may be responsible for the asthenopic symptoms?

Again, is it not fair to presume that we may have to do

with excessive upward rotation in cases in which the lateral muscles are so perfectly adjusted that they do not permit the globes to swing to one side, and therefore no muscular error is manifest? We will suppose that such a patient has no refractive error, and yet complains of severe asthenopia. Is it not possible that his eye strain is due to the excessive vertical tension? We certainly have all been puzzled over such cases, and after our best efforts, have dismissed them still complaining of eye strain.

It would seem that this is a new field, and that it may be possible to find the cause of the complaint in some of these obscure cases which we have been in the habit of discharging with the opinion that the trouble was not due to their eyes.

Stevens claims that in cases of excessive upward rotation, tenotomy of both superior recti muscles will lower the plane of rotation and will of itself correct existing errors of esophoria and exophoria, *i. e.*, the lateral deviation will in a short time disappear.

We will now come back to the tropometer for a few moments, and explain what the amount of rotation of the globe should be in its various directions. The upward rotation should be from 25° to 30° . The downward rotation should be from 35° to 45° . The temporal rotation should be from 40° to 50° . The nasal rotation from 40° to 60° . It is not necessary to measure the intermediary rotations. When we find the upward rotation much in excess of 30° , say 35 or 40, we are justified in declaring it a case of excessive upward rotation, and if other means of relieving the asthenopia prove ineffectual the plane of rotation may be lowered by tenotomy of both superior recti muscles.

We would expect to find a difference in the amount of upward rotation of the two eyes in hyperphoria. I have examined a number of these cases of hyperphoria with the tropometer, and in none of these cases was there a difference in the upward rotation of the two eyes. We would expect to find excessive inward rotation in esophoria and excessive outward rotation in exophoria, but so far as my experience goes with the instrument, such is not the case.

If the instrument is to prove of any value, it will be largely to determine the amount of upward rotation. If after further trial and experience we find a certain proportion of our asthenopic cases dependent upon the excessive vertical tension, then the instrument will have proved a valuable addition to our armamentarium.

This being a preliminary report, I do not deem it advisable at present to report the few cases I have on record of excessive vertical tension. When I shall have observed them further and shall have gained more accurate knowledge concerning their treatment I shall publish a special paper on this subject.

The Denver and Arapahoe Medical Society.

This report is original with this JOURNAL, and appears only in this Journal.

Drs. Jayne, Spivak, J. W. Graham, C. A. Powers, McLauthlin, Zederbaum, Johnson, Black, Packard, Wetherill, Edson, Hershey, Herrick, Hassenplug, Blaine, Thomas, L. Freeman, Schollenberger, J. J. Powers, Kinney, Macomber, Pfeiffer, Love, Godfrey, Lyman, Fisk, R. B. Freeman, Hall, Hopkins, Mann and Axtell were present at the first April meeting. Dr. G. D. Birdsall, a graduate of the Jefferson Medical College, class of '94, was proposed for membership by Drs. Hershey and Macphatter. The Censors reported favorably on the names of Drs. Hill and Raynor, and on ballot both of these gentlemen were elected to membership.

Dr. C. A. Powers read the first paper of the evening, entitled "Early Diagnosis and Mistaken Diagnosis of Tumors of the Breast." In this paper he pleaded for early recognition, early operation and careful surveillance for years. He reported six recent cases and dwelt for some time upon the use of the microscope in these cases.

Dr. L. Freeman, in discussing it, said: "Although I am a believer in the use of the microscope in these cases, yet I believe we ought to be very careful in accepting its reading as final. Senn says that grave mistakes are made by placing too much stress upon the use of the microscope in tumor examinations. Clinical history I believe to be more important in many cases than the use of the microscope. Under the microscope it is impossible to tell a gumma from a sarcoma. Senn cites a case where a tumor mass was sent to two pathologists, who both reported gumma, yet it turned out to be sarcoma. We have seen a similar case at the County Hospital, where a cancer of the neck was pronounced fibroma, yet clinically it proved to be a cancer. Many tumors are mixed, and the benign part may be sectioned. Emperor Frederick's throat tumor was examined by Virchow and pronounced benign, yet it proved to be malignant. The examination of fresh specimens is always difficult, and the hurry of an operation frustrates even the best pathologist. If the report be absolute, and it be made by a competent man, of course it is of great value. Under ordinary circumstances I think it better to make two operations in tumor cases. One to remove the entire tumor mass and get a positive report as to its nature, and later to operate widely, if necessary."

"The Use of Stimulants in Acute Diseases," was the title of a paper read by Dr. E. P. Hershey. He spoke in detail of atropia, strychnia and musk, the three cardinal remedies that would fan the vital spark in many a worn out patient into a full blaze. Ammonia,

digitalis and nitroglycerin were spoken of only to be condemned. Alcohol in pneumonia he thought to be excellent, and especially in combination with digitalis.

Dr. McLauthlin thought the subject a large one, and that the more one reads on it the less one knows. He believed that stimulation should only be given when an indication presents. The value of alcohol he thought was under-rated by the reader. A small amount of alcohol is often of value early in typhoid by aiding digestion. In strychnine we have our best drug for stimulation. Often, however, it is not absorbed. Digitalis in pneumonia is favored by the bulk of physicians. High temperature interferes with its absorption, and it has a culminative effect. Cocaine with strychnine is excellent as a stimulant in low conditions.

Dr. Edson said that too early and too vigorous stimulation was bad. It is not always a question of mere stimulation in acute diseases. Strychnia is a respiratory stimulant, and in pneumonia it is an excellent thing. In typhoid, strychnia, 1-100 twice a day, takes the place of alcohol. Tincture of gentian or cinchona can often take the place of larger quantities of alcohol in acute diseases. In such diseases digitalis, given in a small dose and slowly swallowed, will be absorbed, some absorption taking place in the œsophagus. In low muttering typhoid he liked alcohol. It acts soothingly upon the disturbed cerebral centers.

Dr. Hershey thought that when we needed a stimulant, that the three remedies mentioned by him stood the best show of doing the best work. In giving musk he gave large doses, five to ten grains, and repeated.

Dr. Godfrey reported a case of osteomyelitis and a case of round-celled sarcoma of the cervical tissues. These cases will appear in full in this Journal.

Dr. Powers was glad to hear him say that in his neck operation he had divided the sterno cleido mastoid muscle, for it enables one to get at these tumors better than otherwise. He thought that possibly it would have been best to have removed the vessels that ran through the tumor.

The report of the committee on inviting the American Medical Association to Denver in 1898 was as follows:: \$7,500 had already subscribed, which included \$500 from subscriptions outside of Denver. Drs. Solly, Hart, Cravens, Work and Stowe had been added to the committee, and the committee recommended that the Society take definite action upon inviting the Association to Denver, as enough money had been subscribed to make it possible for Denver to royally entertain the Association. It was moved that

the report be received and adopted and the committee continued. On motion Dr. Munn was added to the committee, and the form of invitation to get the Association to Denver was left with them.

A communication from Dr. Denison was read asking the Society to solicit the governor to refuse to sign the osteopathic bill which passed the house and senate. It was moved that a committee be appointed by the chair to call upon his excellency and urge him to veto this bill. The President appointed Drs. Denison, Eskridge, Fisk, Rogers and Axtell.

* * *

The second meeting of the month was held in the Ordinary of the Brown Hotel on Tuesday evening, April 27th. The attendance was small, owing to the bad weather. President Jayne presided. The minutes of the previous meeting were read and approved.

Dr. F. E. Waxham read the first paper of the evening, entitled "The Prophylactic Treatment of Pulmonary Tuberculosis." This paper will be published in this Journal.

Dr. Munn thought that the preventative treatment of tuberculosis must be preceded by the education of the public. Even a number of medical men that he knew, did not believe in the germ theory of tuberculosis, and they convey to the public that maybe the theory has not a solid foundation. Until the public is educated we will have hard work to control tuberculosis. We must educate them. Every physician must be a factor in disseminating the fact that tuberculosis is a contagious disease. In New York City the board of health tried the registration of tubercular patients, yet the *Medical Record*, of that city, protested against this just requirement. In time we can get advanced legislation on this subject, but now it would be a difficult matter.

Dr. Freeman said that in Colorado, sputa quickly dried and its germs easily disseminated. Dr. Waxham's suggestion of using cheese cloth for handkerchiefs is dangerous, provided it is allowed to dry. Acquired immunity is a factor that is making the American people more resistant than they formerly were.

Dr. Exline thought that the tenement houses ought to be systematically disinfected, and that teachers with tuberculosis should not be allowed to teach in the public schools.

Dr. Love thought that an inspector of ventilation ought to visit factories, offices and stores, and that we in Denver ought to agitate against the collection of individuals in close quarters. She thought the smoke ordinance ought to be enforced.

Dr. Schenck thought that pure and dry air created vital force, and that we must preserve these factors in their best condition. He

cited a few personal cases in which tuberculosis did not seem to be contagious. He thought that legislators were species of *genus homo* with very thick hides.

Dr. Munn spoke of the fact that in Colorado we had no law authorizing the destruction of tuberculous cattle.

Dr. Jayne thought that those physicians who do not believe in the germ theory of disease usually have not looked into the matter logically, and that it is not due to ignorance.

Dr. Waxham thought that small pledgets of gauze could be used by tubercular patients and put away in a box to be destroyed later.

"Urea" was the title of Dr. E. C. Hill's paper. He reviewed the chemistry of this product and presented Doremus' ureometer, which he thought of great clinical value.

Dr. Axtell thought that the instrument had so many inherent faults that it was of little service. He called attention to the fact that it was a difficult matter to make a standard solution of the hypobromite of soda; that the readings of this ureometer were affected by temperature, certainly by rarefied atmosphere, by the fact that the tube could not be cleansed, and hence friction was increased and that tests with a standard solution of urea gave different readings at different times. He used Squibb's ureometer, but its readings here were more than they were at sea level. Personally he felt that a clinical ureometer was as yet to come.

Dr. Spivak said that with Doremus' ureometer he had found in several repeated testings of urine that it read about the same each time and that he liked it.

Dr. Hill said that he had used Squibb's ureometer, but that he preferred Doremus' for clinical purposes. He felt that tests for urea must be made carefully, just as the test for albumen must be made carefully, and that for him this instrument gave sufficiently accurate readings to be of value. He had noted the high readings of urea in Colorado and felt that it was due to the lessened air pressure.

Dr. Herrick reported for the censors that Dr. Birdsall had been favorably considered by them, but on motion the election was postponed until the next meeting. It was moved and carried that the Society ask the State Medical Society officers to devote one afternoon of the coming meeting to the consideration of "The Prophylactic Treatment of Pulmonary Tuberculosis." Adjournment.

Members present: Drs. Jayne, Spivak, Waxham, Exline, Bucknum, Hassenplug, Blaine, McNaught, Love, Munn, Spratlin, Godfrey, Hill, Simon, Freeman, Herrick, Schenck (of Newcastle, Colo.), Birdsall and Axtell.

Denver Clinical and Pathological Society.

This report appears exclusively in this Journal each month.

The April meeting was held in the offices of Drs. Parkhill, Jayne and Wetherill on the 9th. The membership committee reported the election of Dr. S. G. Bonney. Dr. Solly, of Colorado Springs, Dr. Bond Stowe, of Glenwood Springs, and J. M. Porter, D. D. S., of Denver, were the guests of the Society.

Dr. Munn reported a case of epithelioma of the penis in a man 55 years of age, in which the growth began as a papilloma, which after removal developed into an epithelioma. An amputation was necessary. His report was discussed by Drs. Parkhill, L. Freeman and Hall.

Dr. McNaught reported a case of puerperal convulsions in which only a very little albumen was found in the urine. Previous to the convulsions the woman suffered for two weeks with intense itching. His case was discussed by Dr. Hershey.

Dr. Levy reported a case in which death followed an operation upon the nasal septum, but in which death was not due to the operation, but to a large area of softening from thrombosis of branches of the left middle cerebral artery, which softening was of some months standing. His case was discussed by Drs. Powers, Blaine and Axtell.

Dr. Hall reported a case of regurgitation at the pulmonic orifice.

Dr. L. Freeman exhibited a specimen of skull and scalp, showing a leaf of gold foil which had remained in position for four months without showing any adhesions between the dura mater and foil. Dr. Powers discussed his report.

Dr. Powers reported a case of external oesophogotomy in which a triangular piece of bone, $1\frac{1}{4}$ inches in its broadest part, was removed on the fourth day after its impaction. He also reported the case of a child two years old, who had swallowed a small iron toy wheel which had been located by means of the X-rays just above the head of the sternum. His cases were discussed by Drs. Waxham, Stowe, Hill, Freeman, Axtell and Porter.

Dr. Edson reported a case of normal labor in a primipara in which the husband while suffering from an abscess of the gum, helped to empty the breasts which the baby seemed unable to do. This nursing was followed by an abscess in both breasts, showing direct infection.

Dr. Black reported a case of chronic purulent otitis media followed by symptoms indicative of cerebral abscess, but which on post mortem were found to be caused by a general purulent leptomeningitis. Dr. L. Freeman also reported a similar case.

Dr. Parkhill reported a case of suspected mastoid abscess in which a short but profuse hemorrhage from the nose and mouth had occurred. His interrogations concerning the case were answered by Drs. Levy, Freeman, Black and Waxham.

Dr. Axtell reported a case of a child with all evidences of marked obstructive laryngitis in which he made a tracheotomy. The child died in 14 hours, and on post mortem examination there was found slight œdema of the glottis and an extensive endocarditis.

The Society then adjourned to a lunch. The following members were present: Drs. Axtell, Black, Blaine, Bucknum, Fish, L. Freeman, R. B. Freeman, Hall, Hershey, Hill, Howard, Jayne, Levy, McNaught, Mann, Munn, Parkhill, Perkins, Powers, Walker, Wetherill, Waxham, Whitney, Edson and Gallaher.

LEWIS M. WALKER, *Secretary*.

The Practitioners' Club.

This report appears only in this Journal.

The regular meeting of the Practitioners' Club was held at the office of Dr. Macomber, April 20th. The subject, "Erysipelas," was considered by Dr. Macomber, who reported a case of phlegmonous erysipelas involving entire loss of the scrotum, the testes being preserved. Dr. Hall described a case of erysipelas or dermatitis of the foot of a man 65 years old. Dr. Case reported an epidemic of what was apparently phlegmonous erysipelas in Ohio many years ago. Dr. J. J. Powers reported a case of fatal erysipelas in a young lady. A general discussion followed upon the treatment of the disease. A good attendance was present.

J. N. HALL, *Secretary pro tem*.

Woman's Clinical Society.

The report of this Society's meetings appear in this Journal only.

The second annual meeting of the Denver Clinical Society was held April 6th, Dr. Lawney presiding. Drs. Bedortha, Roberts, Love, Goodman, Gale, Yout and Peavey, members of the Society, were present, with Dr. Mary E. Bates and Dr. Black as guests.

The annual reports of the Secretary and Treasurer were read and approved. It was moved and seconded that Dr. Charlotte Goodman be appointed a delegate from this Society to the American Medical Association. The motion carried. The balloting for officers for the ensuing year resulted in the election of Dr. Gale as

President, Dr. Roberts as 1st Vice-president, Dr. Hayden as 2nd Vice-president, and Dr. Peavey as Secretary and Treasurer. The President, Dr. Lawney, then read the following address, after which the meeting adjourned:

It is with great satisfaction that I look back upon the past year of our association. I see in it the sure promise of advantage to us and to those women who shall come after us in the practice of medicine in Denver. In the greatest of books we read: "No man liveth to himself." It is a law in nature. As we become seasoned in years we realize our dependence upon each other. We know that we have not used so much self-direction as we thought we had when we started out in the ardor of youth. We see the moulding influence of association. Sometimes it has been the fortunate circumstance, sometimes the sweet use of adversity that has brought us on the way, but everywhere and always we have taken with us the helps and hindrances of association, past and present.

I believe that this Society has brought into the life of each one of us something that we would not like to spare. I believe that our reading has been better, our observation has been better and I know that our loyalty to each other has been strengthened.

Women need all the props they can have when they practice medicine in districts remote from the influence of those colleges and hospitals where women work equally with men. Nine years ago a woman practicing medicine in Denver was in a very lonesome business. I think that such a woman could not afford, always, to try to do her best. That sounds paradoxical. She could not afford to undertake a case, the outcome of which was not likely to commend itself to the uninformed judgment of the patient and the patient's friends, although the best medical work in the world is often of necessity ineffectual to save life or limb. She might know her case, and know that she as well as another was competent to apply such treatment as the conditions admitted, but unless her personal relations with the family were unusually secure she must advise a change of doctors or seek to fortify herself with counsel—often the more losing procedure of the two. I say that this was nine years ago. Do not understand that I think that all these conditions have radically changed; it was the same then as now, only more so. The caution that I believe was wise and essential to self-preservation might pass for timidity, but that would not shut one off from practice. You and I may know that a timid doctor is a horribly dangerous person, but the laity does not think so. To lose a patient is the unpardonable fact to them, and it is all one whether it was a case of tubercular meningitis or a cold in the head.

You do not need to be told why a woman is less able than a man to bear this opprobrium; that we have not the prestige of custom, and that we have not here a school or hospital where the work of men and women under obviously like conditions is open to the public for comparison.

I believe that a good deal of "hedging" is still "the better part of valor," but a woman may now take more chances with fewer risks than she could when I began practicing medicine in Denver. We have grown to be a larger company, and while we have not earned a brilliant position, we are known to be a useful body in this community.

I have reason to believe that ethical relations between men and women are more commonly observed than heretofore. I should be ungrateful not to acknowledge my own increasing obligations in this kind.

As individuals we shall bring our best to this Society, and as a corporate body we shall stand behind every honest woman who is practicing medicine in Denver. Women who come here from other parts of our country will join us, will tell us what women are doing in other cities. We shall get some new examples by which to measure ourselves, and to awake in us an unquenchable ambition to do better work than we have ever done before.

To the inexperienced ones who shall come among us we shall be a steadying influence, and because of us there will be fewer to fall by the way, running off into clap-trap methods, nostrums, etc.

Thought becomes clearer when it is put into words. The habit of reporting and discussing cases in the medical society makes one better able to meet the exigencies of practice, consultations are better borne, clinical records are better kept and, best of all, one sees one's own measure as taken by the other members of the Society.

It does not always follow that the obliging member whose activity here is most in evidence does the best work for the Society. The presence of the members that do good work outside inspires every occasion.

The youngest among us has seen a great change in the practice of medicine. Nothing goes by prestige. All things go to the worker, to the one that knows things and can do things—things emphatically. It is the high tide of chirurgery. Never were so great rewards for manipulative skill. The refinements of technique have created specialists for each class of disease.

I think it may be said, with fairness, that the organism as a whole has not been the gainer in a degree that would be commens

urate with the ardor of scientific devotion that has been lavished upon its various organs.

Dr. Nicholas Senn, at the annual meeting of the American Medical Association held last year at Atlanta, said that future historians who should record the work of many gynecologists belonging to the present generation would have reason to express their surprise at what disasters the art of surgery had produced when plied in cases far in advance of a scientific foundation.

In the January number of the *University Medical Journal*, it is stated that in Norway, notwithstanding the advance in the knowledge of asepsis and antisepsis, there has been an increase in the death rate of parturient women from the increasing use of the forceps.

I am very glad to note that pelvimetry is becoming a common practice among obstetricians and that with elective obstetrics there is a corresponding disuse of the instruments of embryotomy.

I hope the records of the coming year will represent more justly the volume of the work we do in gynecology and obstetrics as compared with general practice. We cannot think that heretofore we have fairly reported ourselves in this regard.

We find ourselves at the end of our second year duly incorporated under the laws of Colorado, a well organized body, stirred by no stronger rivalry than that of friendly emulation. There is not a faction among us.

I deeply appreciate the kindness I have received as an officer of this Society, and I assure you that I shall try to do my part in making the work of the one who shall come after me as pleasant as you have made mine.

JOSEPHINE PEAVEY, *Secretary*.

News Items.

Greeley's profession was represented in Denver for a few days this month by Dr. R. F. Graham.

Our friends Drs. Wetherill, Holmes and Spivak have sent us interesting reprints during the past month.

Our June number promises to be of great interest. A number of short papers by Drs. Hershey, McCreery, Godfrey and Spivak will appear.

Dr. M. H. Mack, ex-police surgeon of this city, after resigning his position here left for Chicago for a post-graduate course in diseases of the rectum.

Mr. Paul Weiss, of this city, has issued a new catalogue of mi-

crosscological supplies that would do credit to an eastern house. We are glad to see his success.

Dr. Henry W. Rover and Miss Lydia Heucker, both of Denver, were united in marriage April 21st, and are now housekeeping in their comfortable home in Highlands.

Denver is to be represented at the American Neurological Association at Washington D. C., this month by Dr. Howell T. Pershing, who will read a paper there on "Auditory Aphasia."

Dr. S. E. Solly, of Colorado Springs, is trying the bracing effects of some Chicago spring weather this month, and will be in attendance at the American Medical Association in Philadelphia.

Dr. Lowry, of Sopris, Colo., has gone to New York for a post-graduate course at the New York Polyclinic. His work will be looked after by Dr. McDowell, brother of Chancellor McDowell.

THE JOURNAL has received a subscription from Dr. Alfred E. Bennett, care Presbyterian Mission, Batanga, German Kameroun, West Africa. We will not be content now until we get a few subscriptions from Mars.

Dr. R. W. Corwin, of Pueblo, one of the collaborators of this Journal, delivered a lecture with stereopticon views, on "Hawaii," at the East Denver High School, the seventh in the school board lecture course, on the evening of April 29th.

Denver appears to have the strongest claims on the American Medical Association for 1898. Dr. Leonard Freeman writes us that the profession of that city offers many excellent inducements; among others, gold mines at 15 cents and upwards.—*Ohio Med. Jour.*

Visitors from throughout the state to Denver since our last issue have been Drs. P. F. Gildea and C. F. Gardiner, of Colorado Springs, W. L. Sparta and L. M. Giffen, of Boulder, C. E. Dungan, of Montrose, A. A. McDonald, of Rockvale, and J. E. Johnson, of Kokomo.

As a natural course of events Dr. Munn was reappointed health commissioner by Mayor McMurray for another two years. Dr. Munn has discharged the duties of his office in a highly satisfactory manner, and we are glad to know that the city's general health is to be under his care for two more years.

In the list of papers to be read at the American Medical Association we notice the names of but two Colorado men—Dr. H. W. McLauthlin, "Report of a Case of Chronic Recurrent Endocarditis," and Dr. J. N. Hall, "A Study of Certain Physical Signs of Diseases of the Chest." There ought to be more.

The medical profession of Denver is wide awake to the importance of having the American Medical Association meet in that city in 1898, and will send to Philadelphia a full and strong delegation. In this delegation a goodly number of the Cincinnati colony now living in Denver will be found.—*Cincinnati Lancet-Clinic*.

The surgical division of the police department at the city hall has experienced a "spring renovation" and Drs. Dulin and Miller now answer the various calls sent to headquarters, which range from a sprained wrist to a broken neck. This department is a growing offshoot of the dispensary evil with which Denver is threatened.

Dr. Parkhill appears in the *Medical Mirror* for April through the medium of his picture and his pen, the article from his pen being a clinical lecture delivered at the Arapahoe County Hospital. Dr. Parkhill is now in Washington attending the Medical and Surgical Congress. He will present his device for union of bone fragments.

The regular quarterly meeting of the board of commissioners of the state insane asylum was held at the asylum in Pueblo, April 28th, and the newly appointed member of the board, Charles O. Unfug, of Walsenburg, appeared in the place of Mr. Romero, whose term has just expired. At the reorganization of the board Dr. J. T. Eskridge was elected president, and Mr. Unfug, secretary. During the last two months Miss Sadie E. Shane, graduate of the training school for nurses at Clarinda, Ioa., and Miss Annie Gallagher, graduate of the Alleghany School for Nurses, at Pittsburg, Pa., have been engaged as attendants. A former resolution was passed by the board instructing the superintendent not to engage any more female attendants who are not graduates of regular training schools.

The semi-centennial meeting of the American Medical Association will be held in Philadelphia, the first week of June. The Quaker City is looked up to as a royal entertainer, and the character of the meeting both as to scientific and social entertainment will not be allowed to be surpassed by anything previous to it. Clinical courses where all the great teachers of Philadelphia may be observed in their work will be open free to visiting physicians for a week; both preceding and following the Association meeting. On account of the interest taken in the next regular meeting being held in this city, Colorado will send a much larger delegation than usual. The following physicians will make it up: Drs. Fisk, Pershing, Parkhill, Bonney, T. M. Burns, Coover, Foster, J. W. Graham, Schollenberger and Axtell, of Denver; Solly, of Colorado Springs; Work, of Pueblo; Stover, of Eaton; Bull, of Grand Junction; Stowe, of Glenwood Springs; and Bulette, of Pueblo.

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Editorial.

The American Medical Association in 1898.

The invitation will be extended. Our competitors must clear the track. Denver, the Banner City of the West; Colorado, the Mecca of the sick, must be given an opportunity. It is full time that the main medical convention of the country should meet at its chief pulmonary sanitarium. We want our Western brothers to help get the meeting here. We hope that our eastern relatives will favor us by their consideration.

The Colorado delegation must get together. Present the invitation. Make it strong and pressing. Work then for Denver and the Association in 1898. Rugged Colorado; Old Pike's Peak; Rocky Mountain Scenery; Beautiful Denver; Smiling Colorado Springs; Nestling Manitou and the Gods own Garden all extend a royal invitation to the American Medical Association for its 1898 meeting. Come and get a whiff of ozone right off the mountain tops. Welcome will you be.

† † †

Colorado State Medical Society.

The twenty-seventh annual convention of this society will be held at the Brown Palace Hotel in this city, June 15th, 16th and 17th. The executive committee are able so far to offer the following list of papers:

Treatment of Pott's Disease of the Spine, G. B. Packard; Chlo-

roform in Labor, Kate R. Lobingier; Migraine in Childhood, H. F. Hazlett; The Character of Pulmonary Cases Sent to Colorado, W. H. Campbell; The Treatment of Uterine Fibroids, I. B. Perkins; Difficulties in the Diagnosis of the States of Unconsciousness, J. T. Eskridge; Chronic Lead Poisoning, E. C. Hill; Methods and Results in 450 Cases of Fracture of the Bones of the Fore-arm, C. A. Powers; The Relation of Malpositions of the Macula Lutea to Heterophoria, J. M. Black; Observations on the Woodbridge Treatment of Typhoid Fever, Frank Finney; Insanity of Adolescence, Frank P. Norbury; Electricity in Diseases of Women, Minnie C. T. Love; Medical Customs of the Mexicans and Rocky Mountain Indians, M. Beshoar; A Case of Nasal Sarcoma, W. W. Bulette; Progress Towards Accurate Therapeutics, J. T. Melvin; Some Practical Points Gathered From Sources Wise and Otherwise, Will B. Davis; The Ancient and Modern Instruments used in Diagnosis and Treatment of Diseases of the Stomach, C. D. Spivak; Operative Treatment in Dislocations and Fractures, C. B. Nichols; Physical Signs of Acute Bronchitis, J. N. Hall; Diagnosis, Prognosis and Treatment of Mastoiditis, W. C. Bane; Nasal Polypi, P. F. Gildea; How Does Our School System Influence the Health and Development of the Child, E. Stuver; Relation of Diseases of the Ear to Those of the Throat and Nose, Jno. M. Foster; Present Status of Serum Therapy, Alfred Mann; Ichthyol in the Treatment of Diseases of the Eye, D. H. Coover; Prophylactic Treatment of Tuberculosis, Frank E. Waxham; Diarrhœa in Tubercular Patients; Its Etiology and Treatment, C. D. Spivak.

Papers have been promised by Drs. Hutchings, Robinson, Pershing, Bonney and Leonard Freeman, but no titles have as yet been received.

A symposium on Inflammation of the Peritoneum, Surgical Clinics, a visit to Manhattan Beach, a banquet and a "novel entertainment," the nature of which is kept a secret, but which is thought to be a minstrel performance by the Executive Committee with the Committee on Legislation, are all promised.

At the coming meeting the Committee on By-Laws will offer an amendment which will allow the Society's meetings to be held outside of Denver and which will not make a banquet a necessary part of the entertainment.

The consolidation of two of Denver's largest retail drug houses—the Scholtz Drug Co. and the Hunter Drug Co.—is to take effect June 1st, and the large store room in the Tabor Opera House block is to be occupied by them. As a result of this combination Denver will probably have one of the finest drug stores in this country. It is a step in the right direction.

Book Reviews.

THE STOMACH AND ITS DISORDERS, AND HOW TO CURE THEM.—By J. H. Kellogg, M. D. Modern Medicine Publishing Co., Battle Creek, Mich. 1896.

Books written for physicians on subjects of internal medicine do not, as a rule, venture the positive assertion of "How to Cure Them," but they modestly limit themselves to the more appropriate statement of "Treatment." Though the book that bears the above title is written by a physician and a well known writer on various medical subjects, a glance at the title is sufficient to have one's mind made up that the book is not intended for physicians. We know, for instance, that cancer, in the present state of our knowledge, is incurable; that ulcer of the stomach shows a certain per cent. of mortality; and once these diseases are included, the title is not justifiable. Besides, notwithstanding my firm belief that we are able to treat, at present, disorders of the stomach more successfully than the practitioners of two decades ago, yet the experience of every honest practitioner goes to prove that there are many ailments of the stomach, both organic and functional, which resist even most skilful treatment. My presumption was substantiated by reading the preface, wherein we find that "for years past his (the author's) patients have been constantly demanding a manual which would constitute to some degree, at least, a guide to them in their effort to recover a healthful digestion."

Let us then look at the work from the standpoint of a layman. "The individual who wishes to make use of this work as a means to his own recovery must, first of all, carefully read the *entire work*." So much by way of advice to the poor gastropatics. That is to say, anyone suffering, say, from vomiting, diarrhea or constant pain in his abdomen should, first of all, provide himself or herself with the above named book, and then, in a calm and deliberate manner sit down and read about 400 pages of reading matter, which includes a scientific treatise on anatomy, physiology, foods, new discoveries relating to digestion, all the maladies the stomach is heir to, and an elaborate catalogue of all the products manufactured in the mills of the Battle Creek Sanitarium Health Food Co., each and all of which are a "sure cure for dyspepsia." Having studied the book thoroughly and conscientiously he or she is advised to "seek either with *or without* the aid of a physician to arrive at a correct diagnosis of the case." The treatment, of course, is an easy matter. It consists simply in looking up the index and "turning to the section which deals with the particular form of digestive disturbances." The usual adage "If not cured the money will be refunded," which one expects to find as a matter of logical conclusion is, I suppose, omitted by an oversight of the proof reader.

Thus diagnosis is made easy, the treatment still easier, and the cure is assured. Ye American stomachs, rejoice! To your sufferings an end has come. From Battle Creek salvation cometh, and from the Health Food Co. the staff of life descendeth. Ye medical colleges, all over the land, take notice and omit from your curriculum the diseases of the digestive organs. Tom knows it all, Dick is the diagnostician and Harry supplies *granose, bromose and gofio*. Ye specialists in gastrology, shut up your shops and become agents for the Modern Medicine Publishing Co.

I have had some medical training, have had some experience in the treatment of disease of the digestive organs, have also carefully read "The Stomach and its Disorders, and How to Cure Them," and I positively affirm that should I have the misfortune of being afflicted with some gastric disturbance, I would not hesitate to apply to Dr. Kellogg for medical advice. First, because I will not be able to make out my own diagnosis, be it even for the sole reason that no one is able to palpate and percuss his own abdomen, and secondly, because I believe Dr. Kellogg is an able man and knows his subject thoroughly, as is manifested in this very same book, which I unhesitatingly condemn for no other reasons than those stated.

I make the following offer: Any one who is sick and (1) will have the patience to read the entire work of Dr. Kellogg, (2) make his own diagnosis, (3) treat himself accordingly and (4) will be cured, may take a trip to Denver, be exhibited before all the medical societies of the state, and I will defray all the expenses. My offer is good for one year from date.

C. D. SPIVAK.

A. G. Spaulding & Bros., manufacturers of the Christy Anatomical saddle, announced a competition, open to doctors only, for the best written advertisement setting forth the good points of the Christy Anatomical Saddle. Hundred of advertisements were received up to the closing day of the contest, April 15th. A jury, consisting of Mr. George B. Gallup, advertising manager of the *Metropolitan Magazine*, New York; Joseph Wilberding, advertising department of the *New York Times*, and J. W. Curtiss, of A. G. Spaulding & Bros., decided, after careful consideration, to award the prizes as follows: First prize, \$50, won by W. H. Thompson, M. D., Winamac, Ind. Second prize, \$25, won by F. A. Myrick, D. D. S., New York. Third prize, \$10, won by E. R. Axtell, M. D., Denver. To each doctor contributing an advertisement which was accepted one Christy Anatomical saddle was sent free of charge. The advertisements received were varied indeed, and show conclusively that the doctors of the country are very much interest in the saddle question.

THE COLORADO MEDICAL JOURNAL.

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No. 6

Original Communications.

DIGESTION VS. DRUGS IN THE TREATMENT OF PULMONARY TUBERCULOSIS. *

By SAMUEL A. FISK, A. M., M. D.,
Denver, Colo.

About a year ago it was my privilege to visit, under favorable circumstances, the McLean Hospital for the Insane, at Waverly, Mass., where an entirely new plant has been erected, at a cost of something like \$1,250,000, constituting one of the most perfect asylums for the care of the insane in the world. After being shown through the buildings and grounds, and having been absorbed in admiration at its completeness and the attention shown to details, I asked what was the line of treatment addressed to the particular class of disease under observation, and was told, essentially, that it was "FOOD and FRESH AIR."

A few days later I was at Saranac Lake, N. Y., and under the kindly guidance of Dr. E. L. Trudeau was shown through the laboratory and sanitarium there, and I saw some of the results, known to you all, that he is accomplishing in the care of pulmonary tuberculosis. My inquiry was the same in regard to the line of treatment, and the reply was essentially the same, "FOOD and FRESH AIR."

In contrast with this practical simplicity at two of the leading institutions for the care and treatment of two of the most serious diseases that attack mankind, I wish to call your attention to the mass of drugs that are vaunted, in the medical publications and out of them, in the cure of disease; and not the least of all, that are extolled and praised to the skies, as useful in the arrest and cure of pulmonary tuberculosis. The pages of our medical journals contain long and glowing accounts of such. The letter carrier seldom passes our doors with-

* Read before the American Climatological Association, Washington, D. C., May 7, 1897.

out leaving us some pamphlet or circular, calling our attention to this or that remedy; and the agent besieges our offices and pesters the life out of us, if we will let him, and loads our shelves to groaning with sample bottles. How much good has come from all of this? Is the profession, is the patient one whit better off for this multiplicity of remedies? Have we advanced at all on the simplicity of "FOOD and FRESH AIR."

It seems to me that the profession itself is somewhat to blame for this state of affairs, if it be bad, as I think that most of us will agree that it is.

I have in mind a patient who was getting, by actual count, eighteen different remedies in the the course of the twenty-four hours. His tongue was brown and furred, so that you could almost plant potatoes on it. His appetite was gone. His bowels were constipated and his urine scanty, highly colored and loaded with urates. He was being burnt up with fever, and yet he was certainly getting enough remedies. A little calomel and attention to the details of ingestion, assimilation and egestion, made a great difference in his condition and he began at once to improve.

I have in mind another patient, who was receiving hypodermic injections and other treatment, addressed to the bacilli, with an effect somewhat like that of the previous case—furred and brown tongue, loss of appetite, constipation, scanty urine and fever; where calomel, some salt of potash, and attention to food and fresh air, brought about the surprising result that she obtained an arrest, or cure, of her trouble and returned with safety to live at her home in the EAST.

All of this may sound like the simplest A, B, C, and I would not dare call it to the attention of this Association, were it not that I am daily seeing such simple principles violated in fact.

The bacillus has assumed such monstrous proportions in our eyes that he must be hunted and killed at any cost. It has been remarked that more patients have been killed with antipyrin than have died of the *grippe*—whatever that may be. I sometimes wonder whether the same thing could not be said of creosote and tuberculosis. My own experience has not been favorable to the use of creosote. I have seen it upset the digestion more often than accomplish anything else; and the best thing that I can say for it is that it has the endorsement of a member of this Association, for whose opinion, based upon a large experience, I have great deference. In a large number of cases that I see, one of the first things that I have to do is to stop the use of creosote and give calomel and potash.

In my opinion no drug should be given which interferes with the digestion, with the proper nourishment.

Dr. Trudeau writes in a recent article: "At the sanitarium the utmost attention is given to the alimentation of the patient and every attempt is made to induce him to take and digest as much nourishing food as possible. * * Little stress is laid on the administration of drugs except when necessary to relieve symptoms; but cod liver oil, the hypophosphites and arsenic are very generally made use of."

In 1889, in an article read before the Colorado State Medical Society, I said: "I have seen patients with consolidation, night sweats, constant cough and profuse expectoration, accompanied by loss of strength and flesh and, it may be, with hemorrhages, do admirably, because they could eat, digest and sleep; whereas, I have seen others similarly affected go down rapidly because they could not eat, nor digest what they had eaten, nor sleep."

Two cases representing this difference came under my observation quite recently. They were both young men, in the twenties; both students, one at college and the other teaching; they came from adjoining states and were each affected with a rapid tubercular process invading both lungs; they each had fever and sweats, with profuse expectoration, bacilli, shortness of breath, etc.; they had each lost strength and considerable flesh and the hearts of each were irritable. One could not eat, nor assimilate, and he ran down rapidly and was sent home, presumably to die; the other, as he expressed it, "ate like a horse," and he has made such improvement that in a month's time he has gained five pounds in weight; the pulse has fallen from 122 to 106, the temperature from 103° to 100.4°. His cough and expectoration have decidedly diminished; his chest is considerably drier, and his strength is greatly improved. In fact, he is on the highway to recovery. He has not been given creosote nor any drug to destroy the *bacillus*, but his digestion has been fostered.

And here again care has to be taken not to tax too severely the digestive powers. The enforced feeding that is often employed, especially when coupled with a life of inactivity, is likely to upset the digestion, if care is not exercised; and it is frequently a nice point to determine the limit of toleration. In fact, this ability to eat, to assimilate and eliminate, constituting very largely the powers of reaction in our patients, is to be most carefully guarded.

In chronic cases, with considerable disturbance to the circulation, as in chronic bronchitis, asthma, fibroid conditions and emphysema, we are apt to find that the patient is prone to become bilious and that the digestion has to be carefully watched. Ofttimes nothing is better in these conditions, as in the passive hyperemia, from cardiac complications, than a good dose of calomel.

I have noticed in the cases of hemorrhage, of which I have had a

good many under observation this spring, that they were apt to be affected with constipation and with scanty and high urine, and I have used catharasis and diuresis with good effect. The point that I wish to make is that the digestion is the *piece de resistance* in the treatment of pulmonary disease, to be fostered and protected at all hazards, and not to be sacrificed for any desire to destroy that arch enemy, the *bacillus*.

It should not be necessary for me to define what I mean by digestion. I know that I am not scientific in the use of the term—but I mean the ability to eat, to assimilate and eliminate, in short to nourish properly. These are old processes, but none the less vital, much more so, to my mind, than drugs. They should be the possession of every human being.

"Men and gods have not outlearned it,
And, how oft so e'er they've turned it,
Not to be improved."

REPORT OF CASES OF OSTEOMYELITIS AND SARCOMA. *

By ALFRED C. GODFREY, M. D.,
Denver, Colo.

Demonstrator of Anatomy, Medical Department, University of Denver.

In reporting before this Society this evening a case of osteomyelitis, I have nothing new to advance, but report the case as one of a class of cases pre-eminently neglected throughout our land.

The patient was sent to me by my friend Dr. Gillingham, of Ward, Colo., with the following history: He was a robust man of 35 years of age, and had always, with the exception of a "sore leg," enjoyed good health. Fifteen years ago he received a kick from a horse on the crest of the right tibia. No fracture was produced, but there was a severe contusion of the parts involved and a periostitis of no small degree of severity was set up. Local applications did not allay the inflammation and the pain and swelling increased until an abscess formed and the pus itself made an opening through the tissues.

A few spiculæ of bone were discharged, and the inflammatory action was lessened, but a sinus remained through which small pieces of bone were discharged from time to time. The patient again resumed work, and after a long period of time (of which the patient could not remember the exact length) the sinus closed and was followed by severe pain and symptoms which accompany rise of temperature. An opening was made and the pus evacuated. Several sinuses persisted

* Read before the Denver and Arapahoe Medical Society.

up to two years ago, when they all closed spontaneously. No trouble was experienced until three months before the time I saw him. At that time he began to suffer pain in the limb which was worse at night. It continued to grow worse in spite of all efforts in the way of local applications, and became so severe that morphine freely exhibited had but little effect upon it. He grew thin, became yellowish in appearance and, owing to loss of sleep, presented a very woe begone aspect when he arrived in Denver. Amputation of the leg had been strongly advised by one of his medical attendants, but fortunately this was strongly refused by the patient. Constipation and anorexia were present to a marked degree. The limb was swollen, the bone thickened and at a point just internal and below the tuberosity of the tibia existed a point of extreme tenderness. Increased heat was easily demonstrated over the entire tibia, but especially at the tender point. His temperature was 101° F., and pulse 120. He at once agreed to the operation and was sent to St. Luke's Hospital, where all preparations for the operation were made. The following morning an incision extending the whole length was made of the tibia, down to the bone. The periosteum (much thickened) was raised and the sclerosed bone chiseled through. The entire length of the tibia was gouged out with no little labor on account of the hard, firm bone found. All through this, at intervals, were found minute pockets of pus. In the head of the tibia a pocket was found containing about an ounce of pus and a smaller pocket was found in the internal malleolus. Thorough evidema or curettement of the cavity was performed, and the cavity thoroughly deluged with a solution of 1-3000 bichloride. It was then thoroughly dried and the surfaces rubbed with iodoform. It was packed with iodoform gauze and the patient put to bed. He rallied very nicely from the anesthetic and had much less pain.

The temperature, however, remained from 99° to 100° F., and there was still some pain. While his general symptoms and cachexia disappeared markedly, still on account of the pain and rise of temperature I thought that some focus of infection must still be left. Accordingly another operation was resorted to, and we were rewarded by finding another pocket of pus in the malleolus. The cavity was again packed and the patient put to bed. This time he did not rally from the anesthetic well, but remained very sluggish mentally, and finally became delirious, especially at nights. The iodoform was at once changed for bichloride gauze and he seemed better, but was still delirious at times. He asked one of the nurses to send for his wife, who came at once, and never was such a change seen in any individual. At once he became rational and remained so until he left the hospital,

three months later. I believe there are some patients who can not stay in hospitals away from friends and this man, I think, was one of them.

In a recent number of the *American Journal of Gynecology and Obstetrics* there is an article on the subject of iodoform poisoning. The symptoms there detailed accord with those of the patient now under discussion, with the exception of a rash. So that probably some of his trouble was due to the absorption of iodoform which was freely used at first. The dressings were changed every other day, under the strictest antiseptic precautions, and granulation soon began. The cavity filled rapidly, and when he visited me two weeks ago the cavity was about full and the wound looked healthy. He walks without cane or crutches, and does work at Ward. A letter from him informs me "he is very well." Syrup of hypophosphites and strychnia were exhibited right along. He improved in general health.

The use of Senn's decalcified bone chips would undoubtedly have hastened the filling of the cavity; but they were not at hand. Schede's moist blood clot could have been used, but in so large a cavity I thought it would not do so well. I would like to elicit by the recitation of this case the success met with in the various fillings now in the hands of different surgeons for the sake of comparison.

Another case which has proved of great interest to me, and one which, from the standpoint of the diagnostician, caused us to guess rather than to be able to speak with positiveness as to its exact nature.

On the 6th of April I was called by my friend Dr. Richmond, of Black Hawk, to remove a tumor of the neck. The patient was a robust boy, twenty years of age, florid of countenance and very well nourished. Six months previous he had noticed a small lump on the side of the neck, just at the anterior border of the sterno-mastoid muscle. It caused no pain, was quite movable and altogether gave him but little concern. For the first three months the growth increased in size very slowly, but in the last three months it had grown rapidly and at the time of the operation had become a most formidable looking appendage. It pushed up the pinna and lobe of the ear, extended from the spinous processes of the vertebræ over the submaxillary triangle of the neck and to within one inch of the clavicle below. It was hard to the touch, did not pulsate nor fluctuate and was only slightly movable. The skin was not adherent, but was stretched very tensely over the growth. Considering the age of the patient, the rapidity of growth, the absence of lymphatic involvement, we thought that it must be a cyst highly distended with fluid, or a sarcoma. The patient suffered from pain over the region over the Trapezin's muscle, and about the shoulder. Pressure was thought to exist on the spinal

accessory nerve. It gave but little pain about the tumor mass itself.

Removal was decided upon, and an incision extending from a little below and behind the ear was made along the border of the sterno-mastoideus to the lower boundary of the tumor. The superficial fascia and the platysma myoides were divided, and the sterno-mastoid drawn to the outer side. We then came upon the tumor itself, covered by the deep cervical fascia.

In the upper portion of the wound the posterior belly of the digastricus stuck out prominently and farther forward crossing the space could be seen the hypoglossal and lingual arteries were brought into view by raising the submaxillary gland from its position on the mylo-hyoideus muscle. The lower border of the parotid gland was easily discernable and the gland was readily peeled in an upward direction from the surface of the tumor. The external jugular vein lay white and emptied of its blood from pressure over the sterno-mastoideus.

The tumor seemed adherent everywhere. We were able to get to the front side of it, and it rested right upon the alæ of the thyroid cartilage. Still it could not be rolled over outward, as I had expected. Working downward below the omo-hyoid carefully, I got to the bottom of the tumor and there found a white band of tissue, resembling a nerve, entering the substance of the tumor. At the upper part of the tumor and extending out of it we could see a bifurcation and decided that this was the artery. An incision was made through the tumor onto the arterial wall, and the mass after being separated from the fascia and the structures in front was rolled out around the artery. The sterno-mastoid was terribly stretched and had been transversely divided to facilitate manipulations and the turning out of the tumor. Above it burrowed up along the deep fascia and was found against the styloid process of the temporal. After much pulling, tearing and snipping with the scissors, the tumor was enucleated and having been separated from the trapezius behind came out. It was broken by a pair of forceps being used in the attempt to lift it up the spinal accessory was also peeled out the same as the carotid artery, which began its rhythmical beats as soon as it was released. The wound was then searched for more particles, and not finding any we sutured the sterno-mastoid and the fascia and skin, and having put in a drain of bichloride gauze, dressed the wound.

Those engaged in the operation were Drs. Richmond, Allison and myself. Mrs. Richmond rendered most valuable assistance by keeping the water on the sponges, and instruments constantly changed, thereby rendering them always clean. A letter from Dr. Richmond states that the patient is doing nicely, but we must now put in an anxious time waiting to see whether our efforts will be rewarded by a non-return of

the tumor. A microscopical examination of the tumor was made by Dr. Axtell, of Denver, and he reports it to be a round-celled sarcoma. I had the pleasure of seeing the sections at the doctor's office before coming here this evening, and they were beautifully made specimens. The cells were very small, and there existed but little reticulum of connecting tissue, making the growth one of the most malignant forms of sarcoma.

PAIN AS A SYMPTOM IN PLEURISY.

By J. TRACY MELVIN, M. D.,
Saguache, Colo.

During the past two years I have had my attention called very forcibly to the fact that the pains of pleurisy are in many cases so variable as to make serious errors in diagnosis possible. We are all somewhat familiar with the fact that in children we occasionally find cases of considerable effusion in the chest where scarcely any history of an inflammatory attack can be elicited, but it does not seem as if sufficient stress was placed by our writers upon the undoubted fact that severe pleurisy may exist without any pain in the chest whatever, even in adults, and also that there may be severe pain referred to other locations.

As scarcely any physician would overlook the usual type of pleurisy with severe localized chest pains and fever, I would only call attention to the following cases of typical pleurisy which for a time baffled diagnosis:

CASE 1.—Woman, aged 20, temperature 100. No pain whatever, except a feeling of distress in the throat, which was not at all inflamed. She had first felt badly the night before. No cough. Heart sounds normal. Did not even examine lungs, as respiration was normal, and as she had no pain on taking deep breath. Four days later I was sent for again on account of digestive disturbance and dyspnea. I now examined her carefully, found and aspirated a pint and a half of effusion from the right pleura. Rapid recovery followed in a week or ten days.

CASE 2.—Was called in consultation. Man, aged 20. Had been convalescent from typhoid fever two weeks before, but seemed to have a slight backset without typhoid symptoms. Was able to be up in a chair, but was very weak. No history of any pain whatever since convalescence. Had a slight chill the day before. Examination showed accumulation in left pleura, purulent. Resected two inches of a rib, evacuated the fluid and improvement began at once.

CASE 3.—Woman, age 32. Temperature 101. Pulse 120. Complained of very severe pain in the back over sacrum. No cough or pulmonary distress. Subjected this patient to a very thorough physical examination, and could not locate the trouble. After two weeks called in consultant, as she was having chills and a higher fever. No decision was reached. The next week increasing dyspnea led me to examine the chest once more, and I located a moderate purulent effusion circumscribed in the left pleura. Incision and drainage.

CASE 4.—Man, aged 18. Was called thirty miles to see him for a fever which had lasted four days. Pulse 130. Temperature 103. Severe pain about and to the left of the umbilicus. Very tender. Some distension. Some tenderness over McBurney's point. Diagnosis, probable peritonitis from a possible rupture of an abscess cavity. Returned next day with assistance for probable operation and found pain much less, but lower down in the abdomen. Severe and repeated chills. His condition and the surroundings were so bad that I did not feel justified in operating, although I considered the diagnosis clear. Three days later was told the man was still living and had sent for me. I found the same conditions as before, somewhat aggravated. Abdomen tympanitic and greatly distended, although bowels were moving freely. In examining the heart to judge of the possible chance for giving an anesthetic, I discovered pus in the left pleura, which had displaced the heart to the right. Resected portions of two ribs at once and evacuated at least two quarts of offensive pus. Patient died upon the following day. A post mortem six hours after death showed no appendicitis, no inflammation of the peritoneum of any kind, and no lesion, except a most extensive pleurisy of both sides, with gangrene of the lung at lower part of left lobe, with several circumscribed accumulations of pus not communicating with the large cavity. This patient at no time had any cough or chest pain whatever. Proper treatment, adopted earlier, would doubtless have saved his life.

I can now recall cases in the practice of myself and other physicians, years ago, in which I suspect we were sadly deceived in our diagnosis, because of the absence of the chest pain and cough so commonly present in cases of pleurisy.

"Dear Mr. Editor: Please read the enclosed poem carefully and return it to me with your candid criticism as soon as possible, as I have other irons in the fire."

"Dear Mr. Smith: Remove the irons and insert the poem."—
Journalist.

THE UNION CATALOGUE OF MEDICAL BOOKS, AND SOME OF THE PRIVATE MEDICAL LIBRARIES IN THE CITY OF DENVER.

By C. D. SPIVAK, M. D.,
Denver, Colo.,

At a meeting of the Denver and Arapahoe Medical Society held December 8, 1896, the writer of these lines read a paper, entitled "How the Library of the Colorado Medical Library Association Can Double the Number of its Volumes Without Making Any New Purchases—A Suggestion." The suggestion was a direct deduction from the following premises:

1. The Medical Library is only in its fourth year of existence. No wonder, therefore, that many files of its journals are not complete, and that many books of importance are wanting.

2. Many physicians have upon the shelves of their private libraries such books and journals which, if added to those already in the public library, would make the files of the journals complete, and would add several hundred volumes of valuable books, and thus enlarge the scope of its usefulness for purposes of research and investigation.

3. I take it for granted that every reputable physician is willing to offer his books to his fellow practitioners for reference.

The question naturally occurred, how to make this scattered literature available for use, without infringing upon the private property of the individual physicians.

The following card sent out to all the physicians residing in Denver gives in brief the gist of my suggestion.

DENVER, COLO., January 25, 1897.

"At the fourth annual meeting of the Colorado Meeting Library Association, held in the Public Library January 11, 1897, it was voted to accept Dr. Spivak's proposition to make, with the assistance of the Public Library, a list of the bound medical journals and books in the possession of physicians who approve of this plan.

"This list is intended to include only those works not to be found in the Medical Library. Dr. Spivak will call upon you in regard to this matter within a short time and, if you look upon the project favorably, will ask you to make, or make himself if you prefer, on forms which he will present, a list of the bound medical journals and books contained in your library. The list thus secured from the leading physicians of the city will be compiled into one list, easy of reference and kept always on file in the Public Library. This union list will, in regard to any given volume, tell in whose office it may be found, and at what hour any reader who wishes may visit that office

and refer to it. This plan will, as you see, make available to the medical men of Denver a very large and valuable collection of the best medical literature of recent years; a much larger collection than any public institution can offer for many years to come.

[Signed.] "COLORADO MEDICAL LIBRARY ASSOCIATION and
"THE PUBLIC LIBRARY, Denver."

FINIS OPUS CORONAT.—This enterprise, the first of its kind, is an accomplished fact. I have so far "rummaged" the private libraries of Drs. Axtell, Blickensderfer, Beaver, Black, Coover, Denison, Eskridge, Elsner, Fleming, Freeman, Foster, Hershey, Hall, Hopkins, Jayne, Levy, Lobingier, Lyman, McClelland, Macphatter, Nichols, Nickerson, Pershing, Powers, Sewall, Van Meter, Waxham, Wetherill and Whitney.

A card catalogue—by title, author and subject—of all such books and journals as are not to be found in the Public Library has been carefully prepared, upon which is indicated in whose office the book or journal is to be found, and at what hour the reader may come and consult them. This catalogue is now at the Public Library, in the medical department, and may be used from 9 a. m. till 9 p. m. every day in the year.

The result of our insignificant labor has exceeded our most sanguine expectations. We have made available for reference: Books (titles), 845, number of volumes, 929; journals (titles), 163, number of volumes, 1,253; total (titles), 1,008, volumes, 2,182.

A few words about some of the private libraries I have visited. There are three private libraries in the city of Denver which stand out prominently, both by the number of volumes they contain and certain characteristics which they possess:

1. THE WORKING LIBRARY.—The library of Dr. J. T. Eskridge is mainly composed of periodicals—annuals, quarterlies, monthlies and weeklies. Every file is *tuto, cito, jucunde*. Every file begins from the beginning, the first volume in every instance heads the long row. It is made up of some forty different periodicals, which bring from all corners of the globe to their eminent possessor "the latest thought in its latest expression." It is the ideal working library. Every book is a tool in the hands of the master. He loves his books, he knows how to use them, and he can localize his books just as well as his brain-tumors. Of course, there is not a book of importance in neurology which is not to be found on his shelves, as well as the standard works on medicine, surgery, etc.

2. THE STANDARD WORKS LIBRARY.—Dr. T. H. Hawkins' library equals that of Dr. Eskridge in point of volumes. It is composed mainly of standard works—the reservoirs into which the periodical lit-

erature of the world is from time to time drained off. Almost every work of importance published in the English language within the last two decades is to be found upon his shelves. One can see at a glance that he gathers books not with a view "to match the carpet." He reads them, to be sure. The ominous word "Noticed" is to be found upon the first page of every book, which indicates that the book stood the fire of criticism of the editor of the *Denver Medical Times*. Besides, the books are by no means æsthetically arranged. The ragged back and the luxuriously bound repose peacefully side by side, the fat and big-bellied keep company with the thin and lean. All the books are admirably classified by their respective subjects.

3. THE CLASSICAL LIBRARY.—Dr. John Elsner enjoys the privilege of possessing the largest private library in Denver. He has more volumes than the above two libraries put together. He not only loves his books, but he fondles them. He can at a moment's notice lay his hand on any book, and in many instances on any page. Each book knows its place in his brain as well as against the wall. "Men talk about the nerve that runs to the pocket, but one who loves his books, and has lived long with them, has a nervous filament which runs from the sensorium to every one of them." The books are all classical. English, German, French and Latin are well represented. Every book represents the fountain head of some particular branch of our science and art. It is Cullen, Rush, Eberle, Constatt, Duncan, Bell, Bernstein, Virchow, Cheselden, Philip, etc., etc., men who have laid the foundation upon which rests our modern knowledge. And what a fine copy of old Ambroise Paré! There are some rare volumes, vellum bound, with brazen clasps and corners which would make the mouth of a *virtuoso* water. The files of *Schmidt's Jahrbucher* are complete, a thing of which the surgeon-general cannot boast. All the books are classified by their respective subjects.

I cannot refrain from quoting right here the words of Oliver Wendell Holmes: "Be patient with the book collector who loves his companions too well to let them go. A scholar should not be in a hurry to part with his books. They are probably more valuable to him than they can be to any other individual." Books are not buried with their owners, and the veriest book miser that ever lived was probably doing far more for his successors than his more liberal neighbor who despises his learned or unlearned avarice. Should such a plan as the one now carried out in Denver be adopted in other cities, the owners of valuable books would have the satisfaction of seeing the good their books do while they are yet among the living.

I consider myself amply repaid for the time and labor I have spent by the many pleasant acquaintances I have formed, and the

many instructive talks I have had with the owners of books, some of which, as Dr. O. W. Holmes expressed it, "was an event almost like the birth of an infant."

In conclusion, let me express my gratitude to Dr. Henry Sewall, Dr. E. R. Axtell, and to our accomplished librarian of the Public Library, Mr. J. C. Dana, without whose assistance and encouragement this plan would not have been carried out with such success and promptness.

Baltimore Letter.

BALTIMORE, MD., May 29, 1897.

To the Editor of THE COLORADO MEDICAL JOURNAL:

Baltimore is a pleasant city of 500,000, one-tenth of which number is colored; more darkies here than I ever saw before; they lie around as thick as dogs in Constantinople. The streets are paved with asphalt and cobble-stone, there are a number of fine parks, and a large part of Broadway is parked. Monuments and statues are scattered thickly through the city. The people are not in such a hurry as they are in New York; the crossings are quite safe and the gripman and motorneers do not make a special effort to run down a pedestrian. The car conductors are most accommodating. They will wait while a lady walks half a block to catch the car, and they are always ready to give you minute directions about how to go anywhere. The street cries are peculiar. I can now distinguish the cries, "strawberries" and "deviled crabs," but all the others, and they are legion, are "undecipherable." The deviled crab seller corresponds to the Denver tamale and wiener wurst man. There is not a strictly high class restaurant in the city, I believe, but there are some good hotels. Baltimore is the second healthiest city in the world, I understand, yet there are hardly any sewers, the drainage being by means of street gutters. There is practically no malaria in the city itself, Dr. Cathell tells me.

The Johns Hopkins Medical School and Hospital occupies ground about equal in size to a Denver block. It is of pressed brick, built on the pavilion plan. All the appointments of the building are of the highest order. There are apparently no square corners in the rooms, all of the corners being rounded. The ventilation seems to be on the same plan as that in the east wing of the Arapahoe County Hospital. The laboratories are very complete and well lighted. The keynote of all the work here is "science." The institution is so heavily endowed that the financial question is of little weight. The German plan of few professorships and life appointments is followed. Dr. Osler takes a class into the medical wards three times a week. The dispensaries

are open daily and have a large attendance. They are so conducted that each student has personal work with the cases, a feature not so well carried out in other post-graduate schools. In the laboratories there are many assistants, who take great pains with the students, so that the greatest possible good is obtained from the course. This work is much ahead of that in the New York school I attended so far as pathology and clinical microscopy are concerned. As to the surgery I can say nothing yet, for I am not giving it any attention. Professor Welch will soon give a course of lectures on infection and immunity.

Last week I went to Washington to hear the papers on "Internal Secretion" at the session of the Association of American Physicians. The action of the various glandular secretions was thoroughly considered, but very little new work was brought out. So far the thyroid is the only gland whose administration seems to be of therapeutic avail. I visited the Washington monument, and the capitol buildings on this visit also. Washington is almost as handsome as Denver.

Dr. Osler has shown us and spoken upon cases of leprosy, acromegaly, osteoarthropathy, pulmonum, besides very instructive cases of malaria, cardiac disease, tuberculosis, and several abdominal tumors.

I will try in my next letter to give some cullings from the clinics, but just now I am almost too busy to write at all. G. H. STOVER.

The Denver and Arapahoe Medical Society.

This report is original with this JOURNAL, and appears only in this Journal.

Drs. Jayne, Spivak, Zederbaum, Nichols, Herrick, Hassenplug, Beggs, Bell, Hopkins, Whitney, Munn, Wetherill, Van Zant, Hall, Gallaher, Fleming, Levy, Macomber, Chase, LeMond, Kleiner, Wood, Rover, E. J. Rothwell, Harvey, Hawkins, Waxham, Love, Liebhardt, Rivers, L. Freeman, McLauthlin, McNaught, R. B. Freeman, Rogers, I. B. Perkins, Godfrey, J. J. Powers, Simon, Birdsall and Axtell were in attendance at the first May meeting, held on the eleventh.

Dr. H. P. Plunkett, of the University of the City of New York, class of '81, was proposed for membership by Drs. Hershey and Macphatter. The censors reported favorably on the name of Dr. Birdsall, and on ballot he was elected to membership.

Dr. Minnie T. C. Love read the paper of the evening, entitled "Lacerations of the Uterine Neck." This paper will appear in this Journal.

Dr. Wetherill thought prevention was better than a cure on cervical lacerations, but as to the means to prevent such tears he said

we were very much at sea. He did not accept Dr. Emmett's theory that a cervical endometritis is necessary for a laceration to take place. He thought that where a high degree of this exists that pregnancy was not apt to occur. With it the secretions are acid, and it prevents the passage of spermatozæ into the uterus. On the other hand, if cervical endometritis is slight, it would hardly cause a laceration. We see but few women who have had babies who have not had a laceration. Personally, he believed that there is great danger in treating endocervicitis after pregnancy has occurred. Electricity certainly cannot effect a cure where nitrate of silver and carbolic acid fail. He is skeptical as to the good that can be derived from electricity in endocervicitis. In cases of pregnancy with endocervicitis he would keep the vaginal canal clean, and would keep the general health good. He believed that lacerations to-day are often due to the tendency of the time to rush the labor of the mother.

Dr. Liebhardt spoke of lacerations due to gynecological treatment. She reported the case of a young woman with laceration of the cervix, who had undergone an operation for divulsion. She called attention to Dr. Emmett's case, where a young woman had had a cervix purposely lacerated in which an epithelioma was found in the tract and when the patient subsequently died.

Dr. Munn spoke of four cases reported before the New York Obstetrical Society in which serious results had occurred from divulsion.

Dr. Rothwell thought that as antiseptic midwifery displaced old methods, just in that ratio would lacerations disappear. He thought that the hips ought to be lower than the shoulders in obstetrical work. He reported a case of woman who had a large cervical tear that healed up under aseptic treatment in twelve days. He thought a great many tears would do the same, if cleanliness would be maintained. He advocated a douche before and after labor. He knew that his cervical lacerations were less noted than formerly. He attributed this to the fact that tears now heal up.

Dr. I. B. Perkins thought that a pregnant woman with laceration ought not to be operated. The new labor make the condition worse than before. Such work would thus be brought into disrepute.

Dr. Jayne did not believe that endocervicitis in itself allowed lacerations to occur, but he thought that the peculiar interstitial change accompanying it did allow it. He thought a too ready breaking of the bag of water was a frequent cause of cervical lacerations. Personally he believed that an extensive laceration of the cervix ought to be repaired right after its production. He had

seen, however, a case of an extensive laceration of the cervix that healed perfectly without any treatment other than great cleanliness.

Dr. Love thought that careful treatment before pregnancy occurred might prevent many cases of laceration and she felt that it would be good advice to treat such cases early.

The President announced that Dr. Edward Jackson, formerly of Denver, but now of Philadelphia, had forwarded to the Society a paper, entitled "Co-operation and Union Between Medical Colleges," which he would ask the Secretary to read. It was as follows:

"When the doctor from elsewhere comes to Denver he is apt to hear with surprise that this metropolis is already furnished with three regular medical colleges, not to mention the homeopathic institution, and the doctor that tells him of this fact is very apt to assume the defensive and apologize for the number of the medical schools, and the same time expressing the hope that these will some day give place to a single strong medical college. How the desired reduction in the number of institutions is to be brought about is not always stated. When it is, the hope is based upon the chance that the competition between them will become so severe that the weaker will be forced to give up the struggle for existence.

"It has frequently occurred to me that it might be possible to bring about a consolidation of medical schools in a different way, and as those in Denver all seem to possess sufficient strength and enterprise to defer extinction indefinitely, it seems worth while to consider a different method. Although the medical history of Colorado includes the failures of some excellent efforts in this direction, it may still be worth while to put forward a few suggestions; especially, as they meet that popular therapeutic indication they 'cannot do any harm.'

"In the first place, those who would reduce the number of medical colleges too often forget that medical colleges do not exist without reasons, and some very excellent reasons for their existence are frequently ignored. Of course, the downward tendency of competition for students, the over-crowding of the profession, the pauperizing influence of multiplied free dispensaries, are real evils; and in discussing the subject it is often forgotten that benefits equally real attend the establishment of medical colleges. Competition, especially under a good medical law and an efficient state board of examiners, may distinctly tend to improve the quality of medical teaching and will increase the facilities offered for clinical instruction. Considering the high standard that the Denver schools have attained at such an early stage in their history, I think that some such influence must be credited with a part of this desirable result.

"Then, again, the work of teaching reacts favorably upon the teachers and all the more favorably when competition compels them to do their best. The opportunity for clinical work and teaching is attractive to the more ambitious and better qualified of recent graduates; and thus the average professional attainments and skill is probably distinctly higher in Denver to-day because of its medical schools.

"The jealousy and rivalry between schools is obvious. But it may easily be forgotten to credit such institutions with the development of the ability to work together in harmony, among those who have been associated in each of these institutions, an ability valuable and often difficult to acquire. It may well be questioned if the present state of affairs has not curbed the rivalry of individuals to a greater extent than its developed rivalry between institutions. Any institution in which men have to meet and adapt themselves to one another tends to better fit them for harmonious membership in a common profession.

"Of course, these gains have been primarily to the individuals taking part in the medical schools, but there has indirectly resulted a distinct gain to the whole profession and the community that it serves. The problem to be solved is the preservation of as much as possible of these advantages that come from numerous medical schools, while gaining the more obvious and perhaps greater advantages of a single stronger institution.

"If, at a blow, rival institutions could be swept away and the medical teaching of Denver confined to a single faculty of ten or a dozen professors, secure from competition and controlling completely the opportunities for teaching and public clinical work; while the dozen might be benefited it is probable that the profession at large and the public would not, and that the future of medicine in the city and state would suffer seriously. The difficulty is, to get a single institution in which there shall be free opportunity for anyone who has special talent for teaching to develop talent, an incentive for its development in the prospect of professional advancement, and to get this without unnecessary waste in the way of multiplied lecture courses, in which each teacher feels that he must teach part of his subject in which he is very little interested in order to make his course complete and systematic, while his rival, who would be interested in those parts of the subject, is similarly compelled to teach the portion that is of minor interest to him.

"The problem is a difficult one. It is one that cannot be solved off-hand at one sitting or by many sittings of any committee, or by any series of consultations between the representatives of

schools, or by the good advice of medical societies. It must be gradually worked out by actual experiment. But discussion of it, leading to a clearer understanding, will make the experiment more intelligent and profitable and keep it directed along the best lines. Meanwhile, what should be done is to utilize every opportunity for bringing the different schools into more complete harmony. As looking to this, I would suggest for consideration on these points:

"1. There might be complete agreement as to terms of admission, length of course, requirements of curriculum, and fees. Considering these points together, probably one school would gain by agreement as to one and another school as to another, so that the full agreement upon them all would prove of advantage to each institution.

"The next step might be a common examination for the degree. Here there are practical difficulties, but not insurmountable, and, if a common examination could be arranged, the different schools agreeing to graduate only such candidates as pass the common examination, it would open up the way and most certainly bring about much more complete co-operation. With a common examination for the degree, it would be quite possible to arrange that students might take certain branches in one institution, and other branches in another—an agreement that would act as a powerful stimulus to individual teachers, opening wide the opportunities for the industrious well qualified teacher and compelling each to do good work or drop out of the competition. It would make it possible, where a teacher had made himself eminent in a particular line of work, to give him a class fully worthy of the best teaching and to give his teaching to all the medical students of Denver. Meanwhile the other schools would not, as a matter of business, be compelled to create similar professorships and to induce other specialists to come and settle in the city, or to ask men not interested, or but partly competent to teach the same branch, to step aside from their proper work in order that the curriculum might be as complete as that of a rival institution.

"There is little doubt but that in time each teacher would be able to center his attention and confine his effort on the particular subject in which he was most actively interested, and which he would therefore be most competent to teach well and would find the greatest pleasure in teaching; others, interested in other subdivisions of the same general department, could follow their inclinations in the same way. In this way each could lessen the number of lectures he would have to give and could have larger number of students, with the greater incentive that comes from an increased

class, and yet, by an exchange of lectures, the whole subject would be as completely covered and better taught throughout.

"With a common examination and co-operation in the lecture courses, it would be easy to co-operate in the matter of laboratories. Instead of three poorly accommodated, incompletely furnished laboratories for each branch—used a part of the time and standing idle, collecting dust, the rest of the time—there might be a single fully equipped laboratory for each branch, more constantly used and giving better facilities for study at greatly diminished cost. This would naturally be followed by complete co-operation as to lecture rooms and clinical work.

"It cannot be too strongly emphasized that the working out of such a scheme will require time and experience. But it is quite as practicable as the sudden consolidation of existing institutions and, perhaps, by very small steps in the right direction, the desired result may be brought about sooner by the gradual drawing together of the existing schools. This result would also be far better than what is likely to come from the mere extinction of some of the existing institutions. It would tend more to keep medical teaching free, alive and developing, and make Denver more of a medical center.

"What has here been said would to some extent apply to the medical teaching in any of the large eastern cities. Co-operation, securing economy of time, effort, apparatus and building, but preserving the incentive of free opportunities of teaching all capable of doing good work in this direction, are objects to be aimed at everywhere. But these will first be practically achieved somewhere in the west, where obstacles of large accumulations of property and vested interests are not so great, and where there is less disposition to unreasoning conservatism."

Dr. Rogers thought discussion on this subject was excellent, and that it would in time result in good. Denver is not large enough to support three medical schools. A school governed by twelve men is never the school that is under the guidance of many men. Personally, he thought that a large teaching faculty from all the schools would probably be the best plan of consolidation. Give each man a portion of the teaching work. Denver can be made a strong medical center. He was personally indebted to Dr. Jackson for the paper.

Dr. Hawkins thought the subject one of great importance.

Dr. McLauthlin said that he was in full sympathy with the paper. He did not believe that the rivalry was as marked as we are led to believe it is. In uniting the three schools, differences of opinion will arise and small schools are just as apt to spring up

after a consolidation as they have in the past. Personally, he felt that a common tuition fee, a common examination and a common lecture course would prove the best immediate plan.

Dr. Levy thought that there was a unanimity in the belief that certain reforms were necessary now. He reviewed the history of the three schools. Did not know whether the necessity for the three schools exists now, but was prepared to say that it probably did not. He was in favor of a change, a consolidation for the good of the entire profession. The union of three faculties must be carefully considered. Dissensions in faculties are bad. He believed the three schools in Denver were doing good work, and he thought that the profession in this city was very closely united, and in time that it would be feasible to bring about some radical change in medical teaching. Some practical plan must be evolved that will bring about harmony. It cannot come quickly. He thought a "Denver Medical College Association" would be a good plan to get some harmony between the teaching faculties and he would advocate such an organization.

Dr. E. J. Rothwell stated that he had practiced medicine legitimately for many years. He knew the history of the medical colleges in Denver and he did not believe the matter of consolidation hard to settle. Let every man take as his motto, "the profession first—selfishness last." He would fix it quickly. Have the three faculties meet together, say in this room, let them choose the best man in each branch by a competitive examination. Let these men unite into a faculty under the state constitution, and let that school teach medicine. He spoke of the college dispensary, where medical advice and treatment were bestowed for 50 cents a month. He told of a patient who had returned to him with the story of the "50 cents a month medicine," and he asked, "Did they do you good?" The answer came quick, "No, or I wouldn't have come to you." He recommended to the schools that they "Stop grinding sausage, for God's sake!" and in a facetious vein he overhauled the lodge doctors.

Dr. Rivers said that his idea was nebulous as regards the consolidation of Denver's medical schools. He wanted to listen to plans. Personally, he was in favor of a consolidation. He thought the great harm of three schools came from the scramble for students—so many were admitted who ought never to have been admitted. He thought a common plan ought to be arranged for the admission of students into the schools. This, he felt, was a necessary move.

Dr. Wetherill thought that the discussion was bringing about

good. He had heard it for years and he thought Dr. Jackson's recommendations for qualifications for admission, fees and course of instruction would be a good first step. Personally, he was an optimist in this matter of union between the medical schools here.

Dr. LeMond concurred in the general expression of opinion. He believed that we have too many schools, and thought the feeling in the profession towards consolidation was very kindly.

Dr. Chase moved that the thanks of the Society be extended to Dr. Jackson for his paper, which motion was carried unanimously.

Dr. Rogers thought Dr. Levy's idea of a medical college association was good.

The Secretary reported that the Executive Committee of the State Society could not devote an afternoon to a symposium on tuberculosis, as the Society had requested, owing to lack of time.

The committee on extending the invitation to the American Medical Association asked for an appropriation for stationery and typewriting. It was moved and carried that up to \$75 be expended for this purpose. Adjournment took place at 11 p. m.

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Drs. Jayne, Spivak, Sewall, Boice, Zederbaum, Mager, Hassenplug, Hill, Whitney, Fleming, Hawkins, Herrick, Blaine, Hall, Hopkins, Miel, Wetherill, Munn, Raynor, Van Zant, Tyler, Hupp, Black, Thomas, Peavey, Roberts, L. Freeman, Hershey, Powers, Edson, Harvey, Godfrey, Howard, McNaught, McDermith, Walker and Ambler were in attendance on the second May meeting of the Society held at the Brown Hotel on the 25th.

The name of Dr. George F. Roehrig was proposed for membership by Drs. Axtell and Blaine. The Censors reported favorably on the name of Dr. H. B. Plunkett, and on ballot he was elected to membership in the Society. This being the last regular meeting before the usual summer's interval, the Society voted to suspend the rules and ballot on the name of Dr. Geo. F. Roehrig, who was elected to membership.

Dr. Henry Sewall then gave a report of a case of acute rheumatism complicated with pericarditis, diphtheria, lobar pneumonia and pleurisy, from which the patient made an eventual recovery. An enormous hypertrophy of the right ventricle followed, however, with complete compensation which he felt may have been the result of the marked stimulation employed, as strychnia, caffeine, digitalis, etc., were used without regard to established dosage, but for effect, to this support of the heart he attributed the good results obtained.

Dr. Carroll E. Edson excited the liveliest interest of those present

in the reading of his paper, entitled "The Abuse of Medical Charity," which we publish in full in this Journal:

"The question of the abuse of medical charity is an old one, but within the last few years it has taken on a new and seriously threatening phase. The discussion and exposition of the evil has been made so thoroughly in the medical periodicals that I should have no excuse for asking your time this evening, were there not certain conditions here in Denver which seem to me particularly favorable to the local solution of the problem.

"Theoretically our relation to the sick poor is as simple and direct as imaginable. The Samaritan bound up the traveller's wounds with oil and pledged payment for his lodging and nursing. In the light of my experience with hospital clinics I have often wondered how long a stay was made and how much of a bill the traveller ran up against his benefactor.

"The administration of medical charity by hospital or dispensary needs no argument before this Society. The advantage and economical efficiency of such organization you well know. What its abuse can be, and elsewhere already has led to, is fortunately not yet forced upon you. That prevention is easier and wiser than a cure, is my reason for asking your attention. Laying aside all theory and sentiment I wish to speak plainly upon the practical daily aspect of this question, as it concerns us here in Denver.

"Allow me to take certain propositions as granted among us:

"1. Medical care of our sick poor and their speedy restoration to health and earning capacity, is a social and economic necessity. At almost any cost it is cheaper in the end.

"2. Mankind in general is always ready to take the most it can get for its money or free gratis.

"3. While medicine is a profession and not a trade it is the chosen method of earning a livelihood of those of us who have invested time and money in acquiring the training to fit us for our work. We have a right to look to our practice for a fair return to our fidelity and training. (The relation of the physician to business is well set forth by Cheever. *Boston Med. and Surg. Journal*, December 17, 1896).

"4. A position upon the attending staff of a hospital or dispensary is a direct advantage to a physician over his fellows in the way of opportunity to study and observe a large number of cases. Its value in this way is great and undeniable. (The conversion of the clinic to his private practice is unworthy of allusion).

"Were it only the deserving poor, who from no fault of their own have come to want and need our care, it were an easy problem.

There is, however, the large and too readily increased number of those who lie down if they can; who desire their share of the world's goods without return; who start life with the idea that the world owes them a living, and soon demand not only bread, but circuses.

"The two factors which have led to the abuse of medical charity, so rife in our large cities, are the easy pauperization of the public, their ready acceptance of service without recompense, and the willingness of the physician to do hospital work freely for the sake of the advantage to his own training. The first is always present; dispensaries can be multiplied without end. The second factor is within our own control, and it is astonishing how medical men lend themselves to the evil, careless of where it is sure to lead them.

"The extent of the abuse is known to you all, if you have followed the subject in the last year or so. One of the largest dispensaries in the east has reached the state that patients coming in their private carriages have accepted the gratuitous service meant for the indigent. In London it is said that nearly half the attendants upon free clinics could afford to pay something. The abuse at one of the large Boston hospitals became so great that a salaried attendant was appointed to pass upon the applicant for treatment, to weed out those who could pay, a scheme which relieved the physician of the unpleasant duty of refusing service in the face of illness. It is so much easier to be slack and see the patient, than to do our political duty and refuse to countenance abuse.

"There is at present, however, an evil even greater than the dispensary abuse, one which is the outgrowth of commercialism in medicine. I refer to the medical clubs and unions which, rampant in England, have already become dangerously common in some cities of this country. To what extent they have been established in Denver I can not say. They should be prevented at all hazards, and those already started eradicated. It is the Russian thistle of medical practice. Like that pest, it has a fair form. It is so harmless, nay, even so advantageous in its first aspect, but so sure in evil and calamity that I may be pardoned for a brief discussion of its methods. Sociologically these clubs are co-operative unions for mutual medical benefit. It is a well known custom in established mining companies for each minor to contribute a fixed sum every month as salary of a surgeon who makes his home among them and has charge of their health. In such a community where the medical work is largely casual, where there is no outside practice sufficient to support a physician this method has excellent results. It is to be remembered, however, that the surgeon is em-

ployed by the company which has an interest in the men having competent service in case of accident, as a protection to itself, and that in such a community there would otherwise be probably no surgeon at all.

"As this scheme has been adapted to general practice in large communities, the result is entirely different. To a physician starting practice, struggling for a living, the first view of such an assured income is alluring, and it is not surprising that many unwittingly or under dire necessity have accepted such club practice. But the last state of those men is worse than the first. The number of clubs grows and the membership in each increases. Intended to provide competent service to the poor at moderate cost, it soon becomes medical slavery to a host for the merest pittance. Persons of moderate means, even the wealthy, finding that others have care from able men at nominal sums, form their own clubs on similar lines and the contagion of underbidding begins. The dollar a month club is followed by the 75-cent union, and that by the 50-cent association. The competition has not been avoided, but the field narrowed into securing the chance of slaving for a club. That I do not speak upon general ideas alone, allow me to read the circulars of some of these societies in St. Louis:

"NORTH ST. LOUIS HOSPITAL TICKET ASSOCIATION.—This Hospital Ticket Association is now in a flourishing condition with a large list of members all over the city. Its object being to provide medical attention of high order to all those who become members and keep their dues paid regularly. The nominal sum of 50 cents a month is charged, for which the member receives the attention, examination, prescription and medicine from physicians of wide experience, and in case member is confined to his bed a physician will visit at his house, giving medicines, etc., all without any extra cost. Any person, male or female, who is in fair health at present, with no chronic disease, can become a member on payment of one month's dues in advance. After each payment he is entitled to all the benefits of membership, no distinction being made among members, the lowest as well as the highest receiving courteous attention from the physician on calling at the hospital, his wants being attended to, dressings, medicine, etc., given as will best suit the particular case. The member on applying for treatment need not consider he is asking for charity at all, as the fact that he has paid his dues is sufficient to show that he is entitled to all the time and attention the same physician would devote to a man paying the regular fee for consultation.'

"MERCHANTS' AND MANUFACTURERS' HOSPITAL ASSOCIATION.—

This association is a prosperous institution established in the handsome and commodious building, No. 948 Choteau avenue, thoroughly equipped with all the latest appliances and with a drug department second to none in the country. This department is in charge of thoroughly competent men—graduates in pharmacy—who have had many years of practical experience in compounding prescriptions. No students are employed in any branch of the service of this institution. The medical staff is composed of physicians and surgeons of known ability, thus guaranteeing to its members the best of medical and surgical care. The nurses are all graduates and women noted for their kindness of heart, and care for the sick and injured. This institution, reader, appeals to you. Have you any money laid by to care for and maintain you in case of accident or sickness? Are you prepared to pay a physician and a druggist, and pay board and nurses in case of illness or accident? Or will you throw yourself into the cold arms of charity after reading our proposition?

“*Our Contract.*—This association contracts to give you the advice of eminent and able physicians and surgeons when needed, all the medicines you may require for any ailment you may have, or when you are ill or meet with accident to admit you to a first class hospital where you will be carefully attended and cared for. The association agrees in addition to medical and surgical advice and medicine to provide you with bed, board and educated and trained nurses who will give you the most careful attention and who will see that the medicines prescribed by the physicians are given just as directed by him, and will also render those little attentions so necessary to the sick and injured. You are offered all these advantages for the small sum of 50 cents per month, with the assurance that there is positively no extra charge for anything you may require. We maintain our own private ambulance service, which is at the disposal of all members night or day, in addition when a call is received for the ambulance it will always be accompanied by a surgeon who will give such attention to the injured as may be required until the patient can reach the hospital, when such treatment as the case may require will be given at once. All males and females over 14 and under 55 years of age, of good moral character and in good health at time of application are eligible to membership.’

“For these circulars I am indebted to a paper by Dr. Lanphear in the *Annals of Surgery and Gynecology* for February, 1897.

“Thus far in St. Louis. But the system has no lower level. In England the evil has become unbearable. The pages of the *British Medical Journal* have long been increasingly filled with accounts of

the death struggle. "The Battle of the Clubs" has been dreary reading, but full of interest to one who follows the trend of modern socialistic movements. In more than a few communities the club system has brought down the fees for medical attendance, including medicine, to the incredible sum of two pence a visit. We deplore the depression of wages. Medical sweating is not far off under these conditions.

"The many side issues of such a question, the individual necessity of the physician, the right of competition, the ethical relations, are all rich in thought, but I am not concerned with them to-night. I desire only to call your attention to an evil which threatens us all.

"Denver is too fair a field to sacrifice by carelessness, yet there is here a soil not unadapted to this seed. Fortunately the danger lies among ourselves, and so is under our control.

"The misery of a large city increases directly with its population. The crushing weight of numbers tells. Denver is at present a city of easily controllable population. It will of necessity have its poor; if not have abject squallor. Properly managed, the necessary poverty, the worthy and deserving needy, can be easily maintained. The large number of invalids yearly coming to us physically unequal to work are a factor which has considerable importance. Medically they form no small part of the deserving poor.

"The general health of this city is excellent, and with our climate and freedom from tenement houses—for the smallest shanty, open to the sun and air, is better than the reeking tenements of our sea coast cities—should be easily maintained. *Effective* control of our water supply (and drainage) will give us a very low mortality rate.

"There is accordingly a limited amount of medical practice, but for obvious reasons there is here an unusually large number of competent physicians. Rivalry for practice is therefore necessarily keen. Bent to its proper use it should advance our scientific zeal and make for this community a medical repute of the highest order. Uncontrolled, or used in a commercial spirit, it can only lead to the greatest trade depression. In a word we must husband the available practice. That the deserving sick will ever suffer for medical care we need not fear, but it behooves us not to create wastefully a single case of medical service, and under the guise of charity increase pauperization. People who would scorn charity in any form will run to get gratuitous medical advice, not from need of it only, but because of its very *costlessness*.

"As I said, the second factor in this pauperization is unwittingly contributed by the medical profession, in its curious readi-

ness to spend itself unnecessarily. No other learned profession gives so much of its aid and training without recompense. This does a double wrong in pauperizing the public—the worst of all sociological wrongs—and in taking from the rightful earnings of the profession, particularly from that portion who earn the fewest and smallest fees. Why do they so?

“The holding of a hospital or dispensary appointment is of decided advantage to a physician, increasing his range of observation and experience, thereby making him better qualified than his competitors. He is entitled to that advantage, can he get it, but he should be scrupulous in the use he makes of it, *not to do direct harm* to his brothers by opening his clinic to the non-needy, but grasping public, so as to take from practice those who can pay but will not so long as they find free treatment. That this is done intentionally none will claim. Practically it is common. The most potent cause is the desire of getting together a large amount of material for clinical instruction. The majority of all dispensaries are directly related to some teaching body. This is right and proper. A public hospital should serve three purposes, and it does not fulfill its duty if it neglects any one. First, the care of the sick. Secondly, the scientific study of disease. Thirdly, the clinical instruction of those who are to be our successors. The offering of their cases for instruction is the return the hospital patient makes for the free and often costly treatment he receives. The larger the number of cases the more valuable the clinic is, to teacher and student alike, and in this desire the dispensary physician may overlook the grave wrong he does in admitting to his service freely and without question as to need all who apply. So surely as he trusts to the public he will be imposed upon. There is material enough, if only the worthy are admitted, and although he may not directly feel it himself he none the less cuts into the practice which eventually he must share.

“What remedy have we for this threatening blight? It were unbecoming in me to discuss in detail conditions better known to you, but I beg leave to make the following suggestions.

“The present time would seem to offer a most favorably opportunity to solve the problem of dispensary control in Denver. There are at least four large clinics in operation to-day. They are adjuncts of the three medical schools and the one supported by the Rev. Mr. Uzzell. The County Hospital which stands in much the same relation to Denver as the City Hospital does to Boston, for instance, has no out patient department, a certain proportion of the work being done by the county physician.

“The establishment of a centralized dispensary under a suita-

ble board of control would greatly reduce the cost of administration of medical charity, and certainly tend to greater efficiency of service. This is particularly true of special departments as the throat or eye, where more elaborate equipment is essential to the best work. In a surgical service the economy of buying dressings in large amounts which would be made possible by such unification will be found surprising. The mere money saving by the establishing of one dispensary would soon cover the cost of a finely equipped plant, with pathological laboratories. The attendance by an organized staff of physicians will enable the work to be done coherently and with scientific purpose. Records can be kept which will quickly become of great value statistically because of uniformity. Such a dispensary, should it be under the control of the county commissioners, as an out patient department of the hospital will offer a most desirable preliminary training to the house officer before he takes up his interne service. If it be a separate organization as the Boston dispensary is, it still offers a valuable field for service. Chambers street is known all over this country for the desirability of its appointment.

"Such a unification need not in anyway lessen the teaching efficiency of our colleges. The staff of such a dispensary could easily have representation from each, and the clinics divided for teaching purposes among them. There would be quite as much material to show, a well equipped plant and systematic record keeping to aid in the instruction. You who are engaged in teaching are better fitted to suggest the methods of division. Such an organized medical charity can at a diminished cost care for a larger number of patients than can three or four separate establishments. Under one control the undeserving, the burdensome and fraudulent can be readily kept out. With a united medical interest in a clinic doing work of scientific value the smaller and unnecessary dispensaries which continually crop up under misdirected zeal of church workers can be easily kept down, the establishment of clubs prevented and medical practice given a due certainty of recompense."

The paper was discussed by Drs. Munn, Powers, Hershey, Hawkins, and Superintendent Clark of the County Hospital.

Dr. Munn said he approached a discussion of the question at issue with great reluctance, inasmuch as he felt that it would not result in any solution of the problem at this time owing to a lack of unanimity of opinion on the part of those who must take the requisite steps. He spoke favorably of the plan as outlined, and hoped it might prevail in Denver in the near future. Although it might be a painful subject to consider, he felt that here were two evils,

not one only affecting the body politic of medicine. First, *the abuse of medical charity*; second, *the abuse of medical teaching*. He thought the latter as well as the former was a crying evil, and needed radical measures, but he felt that there was little to hope for at the present time in that direction owing to the reluctance of many of those holding positions as teachers and clinical instructors to subordinate personal advancement in the execution of measures directed toward the common good.

Dr. Powers graphically outlined the present dispensary evil in New York City and said the demand for charitable work was increasing year by year, and that the rivalry of dispensary managers for patronage had a tendency to markedly increase the evil rather than diminish it. He personally knew it had reached such proportions in New York that many formerly prosperous practitioners were earning a more and more precarious livelihood each year, and that the outlook was gloomy indeed. He favored some adaptation of Dr. Edson's plan to the conditions here in Denver and saw no reason why it could not be carried out, for instance, as an out patient department of the County Hospital under the immediate supervision and scrutiny of the county physician, who could be granted enlarged powers. He thought clinical advantages and teaching would be improved, and that economical considerations would also emphatically commend the plan.

Dr. Hershey believed the discussion had developed nothing essential or timely. He thought there was no lack of thrift exhibited in the profession, and that the measures advocated were not indicated at the present status of affairs, nor would they solve the problem, did it exist sufficient to menace us as a profession. He thought these abuses had to some extent always existed and always would and that this agitation was but one of many that had been recurring at cyclical periods since medical organization had been an accomplished fact.

Dr. Hawkins said the plan suggested carried with it no assurance that it would do away with evils complained of. He believed that even if the dispensaries were consolidated as suggested and the applicants for medical charity placed under close scrutiny under the "out patient," or any other system, other dispensaries would spring in their places, and the rivalry would be as keen as ever.

Superintendent Clark of the County Hospital spoke briefly, favoring some system of close scrutiny of all applicants for medical charity, the same as carried out at the hospital.

Dr. Edson closed the discussion by saying that his paper was

not intended as a complete solution of the problem, but was offered along *suggestive* lines. He did not fear the adverse conditions and influences which it had been predicted would defeat the plan, if the profession would only present a "solid front" in its support. He said it was not considerations of our own "professional thrift" that should actuate us in dealing with the evil, but the reason must be sought along broader lines. It was a sociological duty and emphatically nothing less.

Dr. J. N. Hall reported a case of systolic murmur of foetal heart in utero, confirmed after birth.

Dr. J. M. Blaine reported an interesting method of treating chronic gleet by passing an insulated Otis sound (attached to the negative pole of a galvanic battery) into the diseased portion of the urethra and applying from two to ten milliamperes for ten minutes—two or three sittings. The diseased granulations were destroyed and cases invariable made early recoveries.

Reports of cases by Drs. Freeman, Black and Whitney were deferred. The Society adjourned to meet October 11, 1897.

Denver Clinical and Pathological Society.

This report appears exclusively in this Journal each month.

The May meeting was held at the offices of Drs. Bucknum and Axtell in the Barth Block. Dr. Bourquin assisted in the entertainment of the Society. There were present: Drs. Black, Blaine, Bourquin, Bucknum, L. Freeman, R. B. Freeman, Hall, Hershey, Hill, Hopkins, Jayne, LeMond, Levy, Macphatter, McNaught, Perkins, Walker, Wetherill, Waxham, Whitney, Edson, Bergtold and Gallaher.

Dr. Hill reported a case of subcutaneous swelling on the lower jaw of a child, one year old, about the size of a hen's egg. There was no sign of an insect bite. Discussion brought out the probability of its being a case of giant urticaria. Dr. Whitney discussed the report.

Dr. Bourquin reported at length a case in which a scirrhus cancer, as diagnosed by several physicians, had been twice removed from a rectum in which, on its third appearance large doses of potassium iodide caused it to disappear. A few months later the man passed a mass the size of a fist. Since then all symptoms have disappeared. The patient had a syphilitic history. Dr. Bourquin also reported a similar case in which operation resulted in death. His cases were discussed by Dr. Hershey.

Dr. LeMond reported the case of a man, 34 years of age, who

had fallen and injured his spine when three years of age. A few months ago, without any apparent cause, he began losing the sight of one eye and now has advanced optic neuritis. Drs. Hopkins, L. Freeman and Black discussed his case.

Dr. Hopkins reported the case of a boy who had middle ear trouble for ten days who suddenly became unconscious and paralyzed in left arm and leg, with a temperature following up 107° F. The mastoid was opened, but death followed. A post mortem showed a purulent lepto-meningitis, with thrombosis of the left lateral sinus.

Dr. Edson reviewed the history of a U. S. seaman who had to leave the service because of recurrent rectal hemorrhages. In the case, the history, the physical state and the rectum were normal. Constipation alternated with looseness of the bowels. Some of the hemorrhages were very excessive. Drs. Freeman, Whitney and Hall discussed the case.

Dr. Bucknum reported the case of a puncture of the right femoral vein, one inch above Poupart's ligament, in a child who had fallen on an umbrella stick. The injury caused death by bleeding into the abdominal cavity. In the case no external mark of violence was to be seen.

Dr. Axtell presented a specimen of a small celled sarcoma of the right kidney, which was followed by secondary growths in both lungs.

Dr. Wetherill exhibited a specimen and reported a case of a woman, 64 years of age, who had a round celled sarcoma of the uterus, limited to the fundus and posterior wall of the uterus. He also reported four hysterectomies for malignant disease, in only one of which was there involvement of the cervix. His cases were discussed by Drs. Levy, Wetherill and Axtell.

Dr. McNaught reported the case of a girl, aged 18, who gave the evidences of some gastric disturbance, whose temperature in the evening was 106 , with a pulse of 100 . The next day the pulse and temperature were normal, but on the following day the pulse was again 100 , but the temperature $106\frac{3}{4}$. Small doses of calomel and anti pyrine quickly dispersed the symptoms and the temperature became normal. His case was discussed and eclipsed by Drs. Edson, Hershey, Bourquin, Jayne and Gallaher. Then Dr. Hall distinguished himself and the Society passed on to the next order of business.

Dr. Blaine reported a case of a primary sore on the lips, followed by secondary symptoms. The girl was a laundress and it is very probable that she contracted the sore from towel linen. His

case was discussed by Drs. Jayne, Black, Levy, Freeman and Walker.

Dr. Hall presented a patient with aortic regurgitation in which a capillary pulsation could be detected in the lips. The case gave a syphilitic and alcoholic history. The urine was normal.

Dr. Whitney reported a case of chorea in a child two or three years of age. He also reported a case of leucocythemia in a young child.

Dr. Walker reported a case of urethral chills in an adult, following the passing of a No. 26 French sound. He also reported a case of gonorrhea in a boy eight years of age, the diagnosis being confirmed by the microscope.

The Society adjourned to a lunch.

LEWIS M. WALKER, *Secretary*.

The Practitioners' Club.

This report appears only in this Journal.

The regular meeting of the Practitioners' Club was held May 4, 1897, at the office of Dr. Carl Johnson. Members present: Drs. Case, McNaught, Macomber, Richmond, Thomas, Johnson and J. N. Hall.

Dr. McNaught filled the hour allotted to the scientific program. Subject: "Complication of Fractures and Their Individuality as to Treatment." The subject proved to be one of interest as well as very instructive and was so well received by those present that the doctor was asked to present the subject again, at some future meeting. Discussion followed by Drs. Case, Macomber, Richmond, Johnson and Hall.

The election of officers for the ensuing year was next taken up, and Dr. Case was elected President, Dr. Hall, Vice-president, and Dr. Thomas, Secretary. The Society adjourned for the summer to meet again on the second Tuesday in September.

J. N. THOMAS, *Secretary*.

Woman's Clinical Society.

The report of this Society's meetings appear in this Journal only.

On May 4th the regular meeting of the Denver Clinical Society was held, Dr. Gale presiding. Present: Drs. Roberts, Yout, Goodman, Love, Lawney, Christy, Black and Mary E. Bates. Credentials as delegate of this Society to the American Medical Association were given to Dr. Goodman. The Board of Censors reported favorably upon the names of Drs. Mary E. Bates and Louisa Black.

On motion of Dr. Lawney the following by-law was adopted: When a new member is proposed for this Society, the full name of the candidate, with the name of the school from which she graduated, and the date of graduation, together with name of the member proposing such candidate, shall be given in writing to the Secretary, whose duty it shall be to read the paper at the next regular meeting.

A paper was read by Dr. Black, entitled "Some of the Causes Producing Diseases Peculiar to Women." In a residence of a year and a half among the Sioux Indians, Dr. Black had but one gynecological case, that of a half-breed, with metritis following abortion. The causes recognized in other communities as productive of pelvic disease were there, but gynecology was almost unknown. Criminal abortion by drugs was common; so was specific disease. Dr. Black saw a number of cases of retained placenta, with some deaths resulting. The meeting adjourned at 9:45 p. m.

ELEANOR LAWNEY, *Secretary pro tem.*

News Items.

Dr. Landon, of Rico, will remove soon to Telluride for practice.

Dr. W. C. Bane spent a portion of last month in Pittsburg, Pa.

Dr. McDaniels, of Villa Grove, will remove to Denver soon for practice.

Dr. Sard Weist, of Longmont, has been elected captain of Company C, First Infantry, C. N. G.

Dr. and Mrs. Axtell are sojourning in Philadelphia and other eastern points this month.

Dr. Delehanty, late resident physician at the Arapahoe County Hospital, has been appointed substitute police surgeon.

Dr. G. W. Moulton, one of the oldest practitioners of Glenwood Springs, will remove to Colorado Springs, June 15th, for practice.

Dr. W. W. Rowan, of Ouray, was in Denver early this month buying supplies for the celebration to be held in that town July 4th.

The plans in contemplation for the erection of a physician's office building at Seventeenth and California Streets have been abandoned.

Dr. Charles Denison has in preparation a memorial on vivisection to be read at the coming meeting of the State Medical Society this month.

Dr. L. H. Kemball, formerly of Aspen, has removed to Denver

and associated himself with Dr. Clayton Parkhill as his assistant in surgical work.

Dr. J. N. Hall, of this city, delivered the annual address to the graduating class of the medical department of the State University, at Boulder, on June 2d.

Dr. Brown, interne at the Arapahoe County Hospital, has been appointed permanent chief resident physician at a stated salary by the county commissioners.

In the second trial of the suit for malpractice in the case of Smith vs. Grant, the jury after being out five days disagreed and the case has been set for retrial.

Dr. Earl H. Fish, so well and favorably known in Denver, has formed a co-partnership with Dr. W. W. Rowan, of Ouray, and is already at work in his new field.

The resignation of Dr. H. W. McLauthlin as professor of the principles and practice of medicine in the medical department of the State University is announced.

Cards are out announcing the marriage of Miss Martha L. Becker to Dr. A. E. Bonesteel, at Central City, Wednesday, June 19th, at high noon. THE JOURNAL extends heartiest congratulations and best wishes.

It is rumored that a movement is being inaugurated by the alumni of the three medical schools to create a joint conference committee to promote consolidation and exert an influence in favor of some proper solution of the dispensary evil.

Drs. Samuel A. Fisk and J. W. Graham were appointed delegates by the Denver chamber of commerce to represent this city at the dedicatory exercises of the Philadelphia museum, to be held in that city, June 1st. President McKinly presided.

The *American Journal of Surgery and Gynecology*, in the April number contains a very interesting article on "A Case of Multiple Costal Resection," by A. Stewart Lobingier, M. D., of this city.

At the regular competitive examination held in May for the selection of internes at the Arapahoe County Hospital, Drs. H. H. Harvey and M. F. Seeters, of the University of Denver, and E. R. Mitchell, of the State University, were selected for the positions.

Mr. C. A. Schofield, long connected with the business interests of St. Luke's Hospital and well and favorably known to the patrons of that institution, has resigned. Mr. C. A. Stone, formerly officiating as chaplain of that institution, has been elected to succeed him.

The article on "The Dispensary Abuse," which appeared in

THE JOURNAL a few months ago, has been the means of arousing an interest in the subject among the general public outside of the medical profession. At a recent meeting of the Charity Organization the subject was given full discussion after a short paper by Dr. Axtell on "The Dispensary Abuse in Denver."

The medical profession of Colorado and the west, especially those who are studying climato-therapy, will be interested in learning that the work on medical climatology written by Dr. S. Edwin Solly, of Colorado Springs, one of the collaborators of this Journal, will soon issue from the press of Lea Bros. & Co. This work will undoubtedly prove to be of immense practical and scientific value.

The seven-come-eleven general assembly have one more record breaker for assinnity to account for. It has just been discovered that the appropriation of \$25,000 for building a cottage extension to the insane asylum, to be taken from the internal improvement fund, is unconstitutional, as it should be taken from the general revenues. Thus, on account of stupidity resulting from so much governmental red tape, the insane asylum will "get along" for at least another two years in the present quarters.

At a meeting of prominent British Americans held in this city on Tuesday evening, May 25th, called to devise ways and means to commemorate the queen's jubilee, the suggestion of Dr. E. J. A. Rogers that a suitable fund be procured by subscription sufficient to erect some permanent memorial to "fittingly express their joy and satisfaction in having been born subjects of the British empire" was heartily received. An addition to St. Luke's Hospital, to be called the "Victoria Wing," was decided upon and committees were appointed to solicit funds.

Charles Wood Fassett, of St. Joseph, Mo., has energy and enterprise, and about every five days organizes some scheme to pull money out of the pockets of the publishers of the medical journals of this country. Personally we believe that a \$10 fee to join the Association of American Medical Journals is entirely too large, and that insufficient returns are given for this fee. His latest is a hopeful desire to represent this Journal at the American Medical Association. For this favor he would like a favorable comment and \$5. We have to admire Mr. Fassett's business ability, but we certainly object to too many schemes.

At the American Medical Association held in Philadelphia this month the profession of Colorado were honored by the selection of Denver as the place of meeting next year. Dr. J. W. Graham was made chairman of the committee on arrangements; Dr. W. A. Jayne was made Assistant Secretary of the Association; Dr. Samuel A.

Fisk presided over the section of medical principles and practice; Drs. J. W. Foster, J. T. Eskridge and A. M. Holmes contributed papers in their respective specialties; and Dr. Charles Denison was elected a delegate to the International Medical Congress, to be held in Moscow, Russia, in August next.

The suppression of boorishness by the teaching of manners is not the object of the ordinances, or by-laws, of health departments against indiscriminate spitting. The bacillus of some of the most destructive of human diseases is spread by infected sputum. The earlier of our modern demonstrators of the infectiousness of consumption were wont to confine animals in enclosed spaces, spray a watery solution of tuberculous sputum into this enclosed space, and see their test-animals come down with tuberculosis in due time. A sojourn in a car or a room, with the dried expectoration of consumptives dissipated in the air, is the more melancholy experiment to which many human beings are subjected unwittingly or unwillingly.—*Sanitary Inspector.*

Dr. W. P. Munn, health commissioner of Denver, is sending out a circular letter to physicians, enclosing the following list of questions, for a reply. The answers to these questions are to be tabulated and made a basis for the future guidance of his department in the inauguration of measures looking toward the restriction of the spread of tuberculosis: 1. Do you consider that consumption or pulmonary tuberculosis is a communicable disease? 2. Do you believe that at this time the disease is considered communicable by a large enough proportion of our people to make measures for its restriction practicable? 3. Are you in favor of requiring the report of cases of consumption by the physician and registration of such cases? 4. If you favor registration, are you in favor of any further cognizance being taken by the health authorities? 5. Do you favor supplying the patient with an educational leaflet in regard to care of the expectoration and excretions, the leaflet to be printed by the health authorities, but given to the patient by his own doctor? 6. Would you advise placarding the apartments occupied by consumptives *in tenements and lodging houses*? 7. Do you approve of the disinfection by the health offices of all apartments in which consumptives have lodged? 8. If you have answered "yes" to question 7, will you assist in the performance of such disinfection by promptly notifying the health office of the location of all apartments that have been vacated by consumptives? 9. Do you approve of the present plan of requesting the public by placards not spit upon sidewalks or on the floors of public buildings or conveyances? 10. Do you believe that it is at this time *practicable* to have an ordinance making spitting on the floors of public conveyances and on sidewalks a nuisance and misdemeanor *punishable by fine*? 11. Have you any suggestions to make as to further action in regard to the prevention of tuberculosis?

THE COLORADO MEDICAL JOURNAL.

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EDWIN R. AXTELL, M. D., EDITOR.

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THIS NUMBER EDITED BY DR. F. B. AMBLER.

Editorial.

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Denver Gets the American Medical Association in 1898.

The individual intelligence, energy and enterprise of Colorado's delegation to the American Medical Association, so ably and persistently exploited through the scholarly attainments and aggressive generalship of Dr. J. W. Graham, their leader and advocate, has gained for the medical profession and the people of Colorado a much coveted honor - the opportunity to entertain in this city next year the most catholic body of scientific investigators and advanced medical workers in the world, the American Medical Association. To this annual gathering every state in the Union sends representatives in the persons of its most scholarly and conspicuous medical men, and to the deliberations of this Association are brought the fruits of enlightened and zealous laborers working in all fields of medical science all over the world. Seldom will the people of Colorado, and Denver in particular, have the honor again of welcoming so important and so imposing a scientific body, or one whose deliberations are directed toward such exalted ends, "the lessening of human suffering and the assuagement of human ills. Colorado and

Denver are happy to be so signally honored, but happier still to be thrice armed with those natural graces and resources, so essential to a good host. If a generous hospitality, an earnest appreciation of the needs of our distinguished guests, a quality and salubrity of climate unsurpassed, a diversity of natural wonders and conditions not excelled anywhere in the world, the "*glad hand*" of a people and a profession living in enlightened fellowship with all laborers in the world of science will in part discharge the obligation imposed upon us, we accept the conditions and trust that all the world of medical workers will meet in Denver in June, 1898, enjoy our bounty, and becoming willing witnesses that our faith had been well kept and that the allurements of this land of sunshine and gold and the interest and sympathy of a progressive and prosperous people will serve as a sufficient recompense for the pilgrimage.

† † †

Typhoid Fever Mortality in American Cities in 1896.

John W. Hill, of Cincinnati, who has been given charge of the work for the betterment and extension of the water supply of that city is an engineer whose breadth of education entitles him to the earnest consideration of medical men and sanitarians. Mr. Hill is not only an engineer of note, but a practical bacteriologist as well; and not content with second hand knowledge of typhoid fever and its causation by impure water, he has made a practical study of that disease both at the bedside and in the dead house. He is therefore perhaps the best fitted man in America, to-day, to speak with authority upon the subject of typhoid fever prevalence and its prevention by means that call for the technical skill of the bacteriologist, the physician and the engineer combined.

Mr. Hill's papers and lectures upon water purification have been extensively circulated throughout the country, and have proven to be educational forces of no mean value. The writer of this article make his acknowledgement of obligation to him.

In a table recently published, Mr. Hill gives the statistics of typhoid fever mortality in 34 of the leading American cities during the year 1896. The highest rate is that for a portion of Knoxville, Tenn., which uses unfiltered water and had a typhoid mortality of 125 per 100,000 of living population which used a partially purified water obtained by "mechanical infiltration" had a mortality of 32. Newport, Ky., which uses unfiltered Ohio River water had the highest actual rate (for a whole city) of any appearing in the table, namely, 63 per 100,000 of living population; Jersey City, using water from the Passaic River, comes next with a rate of a trifle over 61,

while Denver and Pittsburgh tie for next place, with a straight rate of 61; Atlanta, Ga.; which uses water from a mechanical filter, comes next with a rate of 60. Chicago, with its most reprehensible lake supply, lost only 46 per 100,000; Philadelphia, taking its most notoriously bad supply from the Schuylkill, 32 per 100,000, while New York, with a well protected "up-land" supply, had a typhoid mortality of only 16 per 100,000 of living population. In comparison with other American cities, Denver does not shine conspicuously, if we accept the modern dictum that typhoid fever prevalence is dependent upon a polluted water supply.

Mr. Hill's table also presents the statistics from 34 foreign cities for the year 1895. St. Petersburg, with a rate of 87, and Rome, with a rate of 62, are the only European cities that surpass Denver in typhoid fever mortality. Prague, Milan and Liverpool approach our record of several years past, but do not reach that of 1896. *Twenty-one cities* of greater size, and having problems of water purification infinitely more difficult than ours, have so successfully solved them by application of common sense methods to the impounding and infiltration of their supplies, that their typhoid mortality has fallen below 20 per 100,000; and *11 such cities have a typhoid mortality lower than 10*. The rate of London was but 14; of Paris and of Amsterdam, 11; of Berlin, 5; of Hamburg, 9; of Dresden, 4; of Munich, 3; of Rotterdam but 2. When one considers that the supplies of most of the last named cities are taken from large streams, grossly contaminated by sewage of thickly populated territories, and that these cities formerly suffered greatly from typhoid fever, but are now almost free from it, it is quite evident that some measure has been effective in removing the typhoid poison, whatever it may be, from their water supplies.

Mr. Hill has shown in other publications that the effective measure in practically all of these cases was the adoption of what is known as "naturals and filtration." Well constructed filter beds, of large area, having an effective filtering layer of fine sand, well graded, and the grains running from 1-200 to 1-100 of an inch in diameter and the filters having a capacity which is usually about 2,500,000 gallons per acre per day, but may be permitted to rise not higher than 3,000,000 gallons per acre per day, are the life saving factors.

Until Denver has its water supply filtered in this manner it must expect a yearly murder by typhoid fever which may approximate or even exceed that of 1896.

W. P. M.

Copying and Refilling Prescriptions.

Every physician who has taken and read any medical journal for a given period must have noticed that at regular intervals some one has written an article on the evil of substitution.

An honest druggist never substitutes, and as there many such in every city and town we may safely infer that this offense is seldom, and if committed what has he done? Merely used the preparation of one reputable house for that of another. Even if he makes the preparation himself, he has tried as carefully as possible to imitate the original, so that the prescription is still in the line of therapeutics desired by the physician.

But what can be said of the druggist who refills old bottles every day and gives copies *ad libitum*?

This offense, which is passed unnoticed by the average physician, is a thousandfold greater than that of substitution. Every time a druggist refills a prescription without orders from the physician who wrote it he becomes *particeps criminis* with the patient in an attempt to practice medicine without authority, and without any knowledge of the pathological conditions sought to be relieved. If the result is favorable, the patient feels that he has circumvented his physician, and if negative, he will seek advice elsewhere, as his confidence has been shaken simply because the pathological condition has changed since the prescription was written and change of therapeutics is necessary. Every time a druggist copies a prescription without orders he deliberately forges the physician's name and robs him of his knowledge, which in many cases is his only source of revenue. He, therefore, morally commits two crimes—forgery and larceny.

The writer once met a gentleman who after suffering much with dyspepsia finally found a physician who relieved him. Said he: "I would travel 1,000 miles to see that doctor if I were suffering, but *I have his prescription!*" In his case the physician, probably for a very small office fee, was practically treating this man for the remainder of his life.

The whole question resolves itself down to this point, viz: *Who owns the prescription?* In common sense and common law, and according to the ruling of the courts in similar cases, there is only one answer: *The physician.* In the case of Varian & Sterner, architects, of this city, the court ruled that inasmuch as the receipt for the money was written "for professional services," therefore the plans belonged to the architects and the defendant could not use them in building more than one house. In a similar case, in which another firm of architects had receipted for money for "plans and specifica-

tions," the court ruled that the architects had sold their plans, and therefore could not recover.

This is the whole thing in a nutshell: Does the physician receipt for "professional services" or for so many prescriptions? If the former, who owns and controls all his prescriptions. If the latter, then the patient has a right not only to have them refilled and copied and distributed to his neighbors, but he also has the right to have them *copyrighted* or *patented*.

This abuse of privilege by the druggist can have but one result here, as it has in many places, particularly in San Francisco, where fully one-half the physicians keep and dispense their own drugs.

Who is to blame for all this? Not the druggist who is too anxious for trade to offend his patrons, but the weak-kneed and obliging physicians who permit their prescriptions to be hacked about the city by well meaning patients, who imagine that they are honoring their family physician by proving that one of his prescriptions will cure everybody in the neighborhood. This is particularly true in chronic cases, where it is not a question of life or death. Recently a lady, whom the writer had never seen, borrowed a bottle, the label of which bore his name, and brought it to the drug store to have it refilled for her own use. The druggist caring more for his honor and the writer's friendship than for the profit to be made politely refused to refill it, when she returned and asked her friend to come and get an order to have it refilled.

The remedy for this evil lies within the reach of every physician who wishes to protect himself. Instruct your druggist that *you own all the prescriptions you write*, and that he must not copy or refill them without your permission. Have the same printed on the prescription blank in case he may forget your instructions and for the benefit of any others who may chance to fill it and your druggist, who is a gentleman, will be only too glad to obey instructions. If you know of any who are not gentlemen, don't allow your prescriptions to go to their stores.

J. M. BLAINE.

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Paving for Residence Streets.

Paved streets may be so constructed and maintained as to do little injury to the health of a community. Indeed, under certain conditions of heavy traffic, dense population and unfavorable soil and drainage they may tend to improve the sanitary conditions, but upon the whole they must be regarded as a necessary and very expensive evil, to be tolerated when they can no longer be dispensed with, but only for such thoroughfares as must be paved because of constant heavy traffic and unfavorable soil.

The residence streets of Denver are, and will for many years to come, be much more beautiful and comfortable for residence purposes without pavements of any kind than with them; they are less dusty, less hot, less noisy, less expensive for cleaning and maintenance, and far more attractive and healthful, with trees and grass, than they could possibly be with the least objectionable pavement obtainable.

We can not afford to dispense with the natural disinfecting and deodorizing effect of the soil so long as Denver remains a sanitarium and resort for many victims of a disease which is conveyed through and by the expectoration.

The soil of most of the residence streets of our city is peculiarly adapted to roadways for such traffic as they have, and with proper care and attention they may be made clean, pleasant and almost ideal surfaces during the greater part of the year for all sorts of travel and vehicles, at much less expense, too, than would be necessary for the proper cleaning and maintenance of any pavement. Dust is always dangerous, but the dust of a paved street is an undiluted, unmitigated conglomeration of excrement, debris and offal, which is offensive and intolerable. In Denver it carries with it an undue proportion of disease distributors.

With a minimum rain to wash them, with sunshine, dryness and constant air currents to keep the filth deposited upon them in circulation, street pavements in Denver must be kept absolutely clean or they at once become a dangerous nuisance, and an important factor in disease dissemination.

In the light of these facts it is certain Denver should have as few pavements as possible, and those it must have should be kept absolutely clean by daily flushing and washing, for by that plan and that alone can the filth be safely removed. That abomination, the street sweeping machine, should be relegated to the scrap heap, for it serves in the main to stir up a nasty dust for deposit in our lungs and in our homes.

Every citizen of Denver should feel that the healthfulness, beauty and cleanliness of the city is of direct interest to him, and should to this end resist the unnecessary paving of the residence streets, and do what he can to promote the cleansing in a proper manner of streets already paved.

H. G. W.

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Why Not Consolidate Our Medical Schools Now?

On the second day of June the Supreme Court handed down a decision in the matter of the location of the medical department of the State University which is an able and final settlement of this long standing controversy. It is, briefly, that the regents have no

right to maintain such a department outside of Boulder, in which city the University in *all* of its departments is located by constitutional provision. Consequently, the action of the regents in so locating the department in Denver was a violation of the constitution and wholly without warrant of law, inasmuch as their supervision as a governing and controlling body only relates to the University and its departments as located in Boulder, and not elsewhere. This is a matter that interests the profession most vitally, because it offers an opportunity to do away with the abuses at present existing by reason of so many diverse interests in medical teaching, by a consolidation of all these interests into one strong, well equipped, harmonious organization that shall form the nucleus of a great medical center in Denver in the years to come. An amalgamation of the brains and energies of these three institutions into one strong teaching body, would go far toward eliminating the evils and abuses of medical teaching and dispensaries, and would strengthen our position before the eyes of the world at large without mentioning the immense advantage that would accrue by reason of better clinical, teaching and laboratory facilities under a strongly centralized institution. Every consideration looking toward the uplifting of our profession and the attainment of a higher standard of efficiency among our young medical men appeals to those holding positions as professors and clinical instructors to sink personal differences, bury personal grievances, subordinate personal advantage and give their instant and unqualified support to the consummation of some plan of consolidation so devoutly and so earnestly to be wished for.

In order to attain such a result we must inaugurate an entirely new order of things, however, medically speaking. In each of the three schools there exist certain prejudices and traditions, but the new school must arise from them all and not from any one. And in a newer, freer medical atmosphere, let us build a temple of medical learning whose foundations shall be laid in the rock and adamant of professional faith, approval and genuine learning, and whose countless columns crowned with jewelled arches, erected by its able instructors and well equipped graduates to commemorate the years of its virile fruitful life, shall be a source of joy and satisfaction to every one whose interests and activities are employed along medical lines.

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Annual Report of the Bureau of Health of Denver for the Year 1896.—By W. P. MUNN, M. D., Health Commissioner.

This report is somewhat shorter than that of 1895, but contains abundant food for thought, not only for physicians, but for all good citizens. During three months of the year a considerable portion

of the salary account of the department was withheld by the city council and that, too, after an insufficient appropriation at the beginning of the year. A proportionately small appropriation for the police and fire departments would not have been tolerated by the citizens. Further, political disagreements regarding appointments in the health department were at the bottom of the difficulty. Meanwhile the public suffered.

The strenuous effort of the department to restrict contagious and infectious diseases is worthy of great credit. Sunday schools have hitherto been undoubted, but privileged, factors in the spreading of disease. They, it is noticed, are now given an excellent opportunity to work for the health as well as the morals of the young. The chief officer of each school receives, every Friday, the addresses of all cases of contagious diseases which have been reported to the health department during the week. But what a shame it is, that even physicians are charged with carelessness and neglect regarding the spread of disease. Think of it! The custodians of the public health trying to embezzle a little family popularity at the expense of the public weal. "It is only a white throat," or "a severe tonsillitis," or "a threatened diphtheria." The family is told "to use precautions," but that the doctor "will not report the case unless it gets worse." Or "its only a mild scarlatina; there is no danger." When doctors of medicine will spend even a small part of the time and strength they now gratuitously give to college, hospital and dispensary work in teaching their fellow citizens how to avoid disease several existing wrongs will begin to be righted.

Efforts toward the public supervision and restriction of tuberculosis is a long step in advance. Like other reforms, opposition both in and out of the profession is unavoidable and to be expected. Much wisdom and discretion are necessary on the part of public health officers in attempting to restrict this disease, especially the pulmonary form.

In reviewing the year's work of the department, that which stands out in the boldest relief is the investigation and attempted improvement of the water supply of the city. All Denver physicians who are not already informed on this subject should carefully read this part of the report. The importance of the undertaking, together with the obstacles sure to be encountered, would have caused many a public officer to hesitate before taking it up with boldness and determination. It will require both diplomacy and hard blows to win the victory. Let the health commissioner at least have the moral support of the medical profession in the conflict.

H. W. McLAUTHLIN.

Book Reviews.

HYSTERIA AND CERTAIN ALLIED CONDITIONS.—By Geo. J. Preston, M. D. Published by P. Blakiston, Son & Co., Philadelphia. Price, \$2.

Here is another candidate for favor—a book of nearly 300 pages, devoted to hysteria and allied states. The author is a well known neurologist and has had considerable experience in the care and treatment of cases of nervous and mental disease, including hysteria. He is in accord with most writers of the present day in attributing hysteria to perverted function of the cortical cells of the brain. This, of course, does not refer to the cause of the disease, but to its manifest symptoms. In the study of hysteria we should bear in mind that the symptoms of this affection are in a large proportion of cases the epiphenomena of some organic disease in some portion of the body. The writer calls attention to this important point, but without laying the decided emphasis upon it that its value demands. At least, this is the impression that a careful reading of the book has given me.

Hysteria, like insanity, is not a disease, but a symptom of a diseased process or of perverted function. This fact has not been lost sight of by Dr. Preston.

In the chapter on symptomology a very good and concise description is given of the most prominent symptoms of hysteria. Owing to the small size of the book many of the minor symptoms are omitted, and many of the major ones are less elaborate than the special reader desires. However, Dr. Preston has written for the general practitioner and not the specialist. We find nothing new in this chapter, but much that will enable one to refresh his memory readily on certain points. The different headings of this chapter are as follows:

1. Disturbances of sensation—anesthesia, paresthesia, hyperesthesia, affecting both general sensibility and also the special senses.
2. Disturbances of motion—paralysis, contracture, tremor, convulsive seizures.
3. Vasomotor, visceral and nutritive disturbances.
4. Mental symptoms.
5. Miscellaneous symptoms that do not belong to any of the foregoing classes.

The chapter on differential diagnosis is unsatisfactory. This should be one of the longest, if it is meant as a guide to the physician in determining the character of the disease, but less than seventeen pages are devoted to it. The physician will find many valuable suggestions in this chapter, but they are too few and insufficiently elaborated, should the general physician attempt to rely upon them alone in making a diagnosis in a difficult case.

Three chapters are devoted to treatment. Chapter IX, to the gen-

eral principles; Chapter X, to electrotherapy, hydrotherapy and massage; Chapter XI, to rest, cure, hypnotism and surgical interference.

In the matter of general treatment, much valuable information is given by the author. He lays special stress upon the prophylaxis and the general environment of the patient. He recognizes the adaptability of certain physicians for the treatment of hysteria. The patient must appreciate, respect and implicitly obey the physician, and the physician must himself be positive, systematic and full of resources. In regard to electrotherapy, hydrotherapy, massage and rest cure, much detailed information is found which, if carried out, would be useful. The author relies much upon hypnotism in the treatment of many diseases. He will not find many to agree with him in this, unless it be a lighter form, in which suggestions are made repeatedly by the physician in such a manner as to make an indelible impression.

All will agree with the writer that surgical operations upon the womb and its appendages, when these organs are perfectly healthy, for the cure of hysteria, are unjustifiable, and should never be resorted to.

This book is one that may safely be recommended, as it is conservative, carefully written and devoid of vagaries. J. T. ESKRIDGE.

Zuma-Anana.—(*Fine-Apple Digestive Wine.*)—Contains 50 per cent. Pine-apple juice and its proteolytic ferments in a concentrated form. It is an excellent digestant, stimulant, tonic and vehicle.

"Pine-apple juice contains a rennet-like or milk-curdling ferment, also a proteolytic ferment which manifests its proteid digesting power in either an acid, alkaline or neutral fluid.

"The products of such digestion are the same as those formed by trypsin, viz. Proteoses and true peptone, together with leucin and tyrosin."—R. H. Chittenden, *Journal Physiology*.

College of Physicians and Surgeons of Chicago.—(*School of Medicine of the University of Illinois*).—Opposite Cook County Hospital. Four years graded course. First two years largely laboratory work; last two years largely clinical work. Laboratory and clinical facilities unsurpassed in the United States. Six annual scholarships of the value of \$100 each. Physicians and students interested in medical education are invited to investigate this College. For information apply to DR. WM. ALLEN PUSEY, Sec., 103 State St., Chicago, Ill.

An exhaustive report by the well known physiological chemist, Prof. R. H. Chittenden, of Yale, would seem to justify the claims set forth by the American Ferment Co. regarding their new digestive agent, "Caroid." This report shows the digestive activity of Caroid in various mediums and in comparison with other well known digestive agents. It would seem that Caroid, which is a highly concentrated extract from the Pawpaw plant, is not restricted as to class of food, medium or combination with other drugs, so far as its activity is concerned. This is a matter of decided interest to medical practitioners. We are glad to see that the price of this new ferment does not make its general use prohibitive.

THE COLORADO MEDICAL JOURNAL.

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DENVER, COLO., JULY, 1897.

No. 7

Original Communications.

STATE MEDICAL SOCIETY.

FULL AND COMPLETE REPORT OF THE TWENTY-SEVENTH ANNUAL
SESSION.

WITH ITS USUAL ENTERPRISE THIS JOURNAL PRESENTS THIS RE-
PORT SIX MONTHS AHEAD OF THE TRANSACTIONS.

NOTES, COMMENTS AND REFLECTIONS.

The twenty-seventh annual session of the Colorado State Medical Society convened in Denver, on the morning of June 15, in the Ordinary of the Brown Palace Hotel. President Levy, of Denver, called the meeting to order and the Rev. Dean Hart pronounced the invocation.

The minutes of the meeting for 1896 as they appeared in the transactions were voted approved and also the following report of the corresponding secretary, Dr. H. B. Whitney:

"During the past year, nothing of especial importance relating to the Society has come to the knowledge of your corresponding secretary. The customary quarterly statement of dues has been sent to all the members and in this way \$395 has been collected and handed to the treasurer, together with \$30 from new members. The following names have been dropped from the roll of the Society during the past year:

By death: Jacob Reed, Colorado Springs.

For non-payment of dues: Drs. M. Baker, S. S. Duggins, N. D. Estes, O. F. Mentzer, Anna E. Morgan, Neil Macphatter, E. I. Pring, G. H. Robinson, and C. E. Thayer.

By removal from the state: F. E. Yoakum, address unknown; A. L. Craig, Aledo, Ill.; R. T. Gilmore, unknown; Carl Ruedi, to

Davos, Switzerland; Josephine Milligan, unknown; M. A. Walker, unknown; Edward Jackson, Philadelphia, Pa.

During the year the following books and manuscripts have been received: A Compilation of the Statutes of the Commonwealth of Massachusetts, relating to the Massachusetts Medical Society, Transactions of the Canadian Medical Association, The Publications of Societies, Treasury Department Reports, Report of Michigan State Board of Health, Transactions of the College of Physicians of Philadelphia, Proceedings of the Nebraska State Medical Association, Transactions Medical Society of New York, Transactions of the Maine Medical Association, Transactions of the South Carolina Medical Association, Transactions of the Medical Society of the State of Pennsylvania, Transactions of the New York State Medical Association.

If no objection is offered, these books together with similar ones received in the past will be placed in the hands of the Colorado Medical Library Association with the understanding that they shall still remain the property of the State Society.

The following communications which have been received during the year, are the only ones demanding the attention of the Society:

A report from the committee of the American Mineralogical Association in response to an invitation of this Society to meet in Denver states that the committee could make no engagements beyond their year's term of office.

A copy of Resolutions from the Bernadillo County Medical Society of New Mexico relates to the publishing by the Weather Bureau of the United States of Statistical Climatological Tables, and requests our co-operation."

Dr. Exline, the chairman on Sanitation and Preventive Medicine submitted the following report:

Your committee on Sanitation and Preventive Medicine beg leave to submit the following.

1. We are united in the opinion that the privy and cess-pit nuisance, so general in small towns and country homes, deserves the attention of this association. These containers of filth, especially when improperly constructed, are fruitful sources of air and water contamination, thereby distributing the germs of disease over large areas. We think that country residences and unincorporated towns should be under rigid control in matters relating to sanitation.

2. We call your attention to the increasing number of indigenous cases of tuberculosis within our state. We suggest that you officially investigate the causes for such increase, and institute suit-

able measures tending to forestall the development of new cases. We suggest that while insisting upon the employment of the more obvious means, you urge upon the state the wisdom of supplying hospital accommodations for her consumptive poor and incurables, not otherwise suitably provided for from a hygienic standpoint. In addition to more effectual treatment, such patients could be so instructed that they would no longer be disseminators of the disease. We wish to doubly emphasize the recognized importance of disinfecting hotel apartments, hospitals, private residences, and other quarters, occupied or vacated by consumptives where the needful precautions have not been observed, through ignorance or disability.

3. Your committee is convinced that school sanitation is undervalued, and that the teacher's qualifications should include a knowledge of the causes of contagious diseases, and how to limit their spread. We think a school teacher should be able to recognize the common contagious diseases of children in their early stages.

4. We wish to remind you of the dangers that lurk in our circulating libraries. We recommend that some action be taken looking to the abatement of the evils growing out of the handling of infected books. Since Formaldehyde can be utilized as a disinfecting agent without injury to paper or binding, we feel that there is little excuse for the continuance of a source of infection so easily obviated.

5. We are of the opinion that the conditions attending our ignorant and indifferent poor are a menace to the health of all portions of the community. In many instances their sick are not attended by a physician, and are unreported. When death supervenes the cause is left in uncertainty, and the needful means of prophylaxis seldom enforced. The usually untidy habits of such people favor the spread of contagion, which finds its way into the homes of the cleanly, and brings discredit upon sanitary science. It is from the same portion of the community that come a large number of our street hawkers, and male and female venders. Their commodities are often kept in apartments where filth-diseases abound, and are handled by contaminated persons. The license privilege should be withheld from those whose habits and surroundings are such as to endanger those with whom they come in business contact.

6. Since cloudbursts are annual occurrences, at certain seasons of the year, and fatalities from this cause are painfully numerous, we ask that measures be recommended whereby tourists and pleasure-seekers may be prevented from pitching tents and erecting

cabins in exposed situations. Watchers could be hired at small cost to patrol the more frequented dangerous resorts, and danger signals be placed where watchmen could not be present much of the time.

7. We urge the necessity of greater watchfulness and responsibility on the part of the owners and operators of our lake resorts, swimming and bathing establishments. Fatalities occur from rowing, skating and bathing, which could be averted by proper oversight of those who engage in these fascinating and healthful recreations."

The committee on Medical Societies throughout the state reported as follows through its chairman, Dr. M. Kleiner:

"Letters addressed to the members of this committee requesting them to secure reports from their resident and adjoining counties elicited thirteen replies as follows:

El Paso County Medical Society.—President, C. F. Gardiner; Vice-President, W. F. Martin; Secretary, W. B. Fenn.

The Society has held seven regular meetings and one special meeting during the year. The subjects of meetings were as follows: October 96, "Discussion on Typhoid Fever;" November 96, "Report of Case of Anterior Mediastinal Hemorrhage," Dr. Hutchings; December, "Some Interesting Surgical Cases," Dr. McCreery; January, "The Pasteurization of Milk," Dr. R. Meade Smith; February, "The Value of an Examination of the Blood in Diagnosis," Dr. Fenn; March, "Report of Sanitary Condition of the City," Dr. B.B. Grover; April, "Some Interesting Heart Cases," Dr. McCreery.

The special meeting was to take action on the death of Dr. Jacob Reed. W. B. FENN.

Weld County Medical Society.—The President of the Weld County Medical Society is Dr. J. Kerns, of Evans; Vice-President, Dr. W. C. Lovejoy (recently deceased); Secretary, Dr. Norman Bellrose, of Eaton. Number of meetings last year, twelve. No other Society in county. JESSE HAWES.

The Lake County Medical Society.—President, B. S. Galloway; Secretary, Lee Kahn.

Number of active members, 20. Number of honorary members, 1. Number of new members, 6. Number of members also members of the State Medical Society, 10. Number of members located in other places, 1. Number of meetings, 6. Average attendance 10 $\frac{2}{3}$. Papers read and subjects given for discussion, 4. Meetings every second Thursday.

After our good resolutions of last year, it is humiliating to be

compelled to admit that there has been so little life and energy in our association since its last report, but such is nevertheless the case.

We have had a few internal troubles, but they are now well healed, and scarcely a cicatrix is visible. Now that Spring is beginning to make the woods green again, our members have thrown off the cloak of dormancy, and the prospects are good for a better season in the society than we have had for years. We trust our hopes will be fully realized.

LEE KAHN, Secy.

Pueblo County Medical Society.—The officers of the Pueblo County Medical Society are as follows: President, J. A. Black; 1st Vice-President, L. B. Paul; 2nd Vice-President, W. L. Dorland; Secretary, R. C. Robe; Treasurer, H. F. Hazlett; Librarian, W. W. Bulette.

The work of the year has consisted chiefly in the reading of papers before our society and discussion on same. The subjects and authors are given below: "Cataphoresis, Dr. Varley (dentist); "Suggestions Gathered from Sources Wise and Otherwise," Dr. W. B. Davis; "A Method of Operation for the Radical Cure of Proci-dentia Uteri," Dr. T. A. Stoddard; "Inflammation of the Middle Ear," Dr. Wm. C. Bane, of Denver; "Uric-acidaemia," Dr. W. L. Dorland; "Haematorrhachis, with Report of Case," Dr. W. H. Baker; "Modern Methods of Treatment of Tuberculosis," Dr. S. E. Solly, Colorado Springs; "A Case of Complete Blindness from Bilateral Pressure on the Optic Radiation, Probably Due to Hem-orrhage," Dr. W. W. Reed, Fowler, Colo.; "Burns of the Eye," Dr. F. D. Green; "The Tropometer," Dr. G. M. Black, Denver. The pa-per for our June meeting will be by Dr. A. T. King.

Several cases of interest have been reported by different mem-bers of the Society.

There have been received into the Society during the year, three active and three honorary members, giving us a membership of thirty active and eleven honorary members.

The attendance and interest in our meetings has been good, especially since the adoption of a by-law by which the name of any member is stricken from the roll who may be absent from three consecutive regular meetings of the Society except he be absent from the county or he or some member of his family may be sick.

Of not the least importance has been the establishing of a library during the year. There are now about 450 volumes on our shelves. This number while not large yet forms a very good nucleus about which we hope to group a much larger collection

within the next few months. The aim is to make the library especially valuable for reference and research.

R. C. ROBE, Secy.

The Las Animas County Medical Society, Trinidad, Colo.—We have maintained the Las Animas County Medical Society some 20 years, the meetings being held in this city. During the fiscal year of 1896-7, there were held (with quorums present) eight monthly meetings. There were read and discussed five papers. Admitted 3. Removed 4. Present membership 13. Present officers N. E. Charlton, President; A. K. Carmichael, Secretary; D. F. Dayton, Treasurer. No other Medical Society in the County.

M. BESHOR.

Cripple Creek District Medical Society.—The physicians of this district of El Paso county, assembled on April 14, 1897, for the purpose of organizing themselves into a Medical Association, for their mutual benefit and to encourage a higher standard of professional qualifications and ethics. The temporary organization was completed by the selection of Dr. T. D. McKown as Chairman and Dr. Jno. W. Smith as Secretary. A constitution and by-laws was adopted, a copy of which is herewith submitted.

After the adoption of the constitution and by-laws a permanent organization was effected by the election of the following officers: Dr. J. Ernest Meiere, President; Dr. J. H. Boyd, 1st Vice-President; Dr. J. A. Dunwoody, 2nd Vice-President; Dr. S. L. Benson, 3d Vice-President; Dr. H. W. Kirby, Secretary; Dr. W. J. Chambers, Treasurer.

The society organized with 27 members, since which time there has been an addition of 7 members. The society has met semi-monthly since its organization with a very fair attendance of the physicians of the district. At our last meeting Dr. J. A. Whiting read a very interesting paper on "Appendicitis" which was very generally discussed. We expect the Society to embrace all the physicians of the district, numbering about 60. The Society will send delegates to the next meeting of the State Medical Association.

H. W. KIRBY, Secy.

The Alumni Association of the Gross Medical College, Denver, Colo.—(Incorporated.)—Organized April 11, 1894. Samuel G. Mugrage, M. D., President; Saling Simon, A. B., M. D., Secretary.

Number of members, 106. Number of meetings, monthly, 9, annual, 1. Average attendance, 16. Number of members who are members of the State Society, 29.

Titles of papers read and discussed: "Armamentarium of the

Young Practitioner," Dr. T. M. Burns; "Albuminuria as a Complication in Pregnancy," Dr. D. Neuman; "Diagnosis of Incipient Phthisis," Dr. S. H. Meuer; "A Chat on Medicine," Dr. A. Taussig; "Puerperal Sepsis," Dr. T. M. Burns; "On the Use of the Hypodermic Syringe," Dr. Lucy; "Antitoxin Treatment of Diphtheria," Dr. U. G. Roberts; "A Case for Diagnosis," Dr. R. L. Thorp; "Urethritis Gonorrhoeal," Dr. S. Simon.

There were symposiums on Hemorrhage, Poisoning, Pain, Unconsciousness.

Numerous cases were reported and discussed and specimens and new instruments exhibited. S. SIMON, Secy.

The Denver Clinical Society.—President, Dr. Jean Gale; 1st Vice-President, Dr. Una Roberts; 2nd Vice-President, Dr. Catharine Hayden; Secretary and Treasurer, Dr. Josephine Peavy.

Eighteen regular meetings were held. The following fifteen papers were read: "Infantile Diarrhoea," "Stomatitis," "Food Stuffs and Their Values," "Antitoxine," "Hysteria," "Asthenopia," "Nocturnal Enuresis," "Ophthalmia Neonatorum," "Fever," "Ringworm," "Angina Pectoris," "Social Problems of the Day and their Alleviation," "Some Causes Producing Diseases Peculiar to Women," "Lacerations of the Uterine Neck," "Tuberculosis, with Regard to its Prevention."

Number of members, 14; the attendance has averaged well and interest in the Society is increasing.

JOSEPHINE L. PEAVY, Secy.

The Denver and Arapahoe Medical Society.—W. A. Jayne, President; C. D. Spivak, Secretary.

Total attendance, 537. Number of regular meetings held, 16. Number of special meetings held, 1. Average attendance, 31. Members elected, 17. Papers read, 19. Cases reported, 17.

Titles of Papers Read.—"Remittent Fever in Colorado;" "Oxygen with Chloroform as an Anaesthetic;" "Examination of One Hundred Cases of Scars Indicating Right and Left Handedness;" "The Treatment of Pelvic Abscess;" "Gastrodigraphy or Electric Transillumination of the Stomach, with Illustrations;" "Continued Fever Following Typhoid Fever;" "How the Library of the Colorado Medical Association May Double the Number of its Volumes Without Making any New Purchases, a Suggestion;" "Surgical Shock at High Altitudes;" "A Contribution to the Pathology, Diagnosis and Treatment of Gastric Disorders;" "Report of Cases of Phthisis Originating in Colorado;" "A Plea for Operative Treatment in Certain Cases of Fractures and Dislocations;" "A Case Illustrating the Value of Symphysiotomy

when a Tumor Obstructs the Parturient Canal;" "Two Recent Tests of Typhoid Fever;" "Bacteriological Diagnosis of Typhoid Fever;" "Chelidonium Majus in the Treatment of Inoperable Cancerous Growths;" "The Use of Stimulants in Acute Diseases;" "Early Diagnosis and Mistaken Diagnosis in Tumors of the Breast;" "Prophylactic Treatment of Pulmonary Tuberculosis;" "Urea."

Symposiums.—"On Typhoid Fever;" "On Cerebral Surgery."

Titles of Cases Reported.—"Embolism of the Innominate Artery;" "Lung Hernia;" "Successful Inch-and-a-half Resection of Tibia and Fibula in a Compound Fracture;" "Abdominal Hysterectomy Complicated with Double Ovariectomy;" "Tonsillitis;" "Erysipelas;" "Typhoid Fever;" "Osteosarcoma of Femur with Fracture;" "Septicaemia;" "Trifacial Neuralgia;" "Nasal Polypi;" "Orbital Periostitis;" "Cirrhosis of the Liver;" "Kleptomania;" Tumor of the Neck;" "Osteomyelitis;" "Pulmonic Valvular Disease with Systolic Murmur Transmitted to the Back and Diastolic Murmur and Thrill Heard Most Loudly over Second Left Intercostal Space."

One of our meetings was devoted to the discussion of malpractice cases in Colorado. The special meeting was held for the purpose of paying a tribute of respect to our deceased member Dr. A. J. Cattnach (died May 30, 1896). At the initiative of the Society, the medical profession of Colorado has invited the American Medical Association to meet in Denver in 1898, which invitation has been accepted.

C. D. SPIVAK, Secy.

The Denver Clinical and Pathological Society—Clayton Parkhill, M. D., President; Lewis M. Walker, M. D., Secretary.

Membership limited to 40. Number of meetings since last report, 9. Present number of members, 39. Present number of members also members of the State Medical Society, 34. Average membership, 39. Average attendance, 24. Number of guests entertained, 21. Number of cases reported, 128. Number of pathological specimens, surgical instruments, appliances and cases presented, 42. Number of members taking part in the discussion of cases, 148.

Meetings are held on the second Friday evening of each month from October to June inclusive.

Errata.—In the report for this Society for 1896, the number of members taking part in the discussion of cases should read 137 instead of 16.

LEWIS M. WALKER, Secy.

Denver Medical College Alumni Association.—(Incorporated.)—Carl Johnson, M. D., President; A. R. Seebass, M. D., Secretary.

Number of members, 117. Resident members, 38. Average

attendance, 14. Number of papers presented, 6. Number of cases reported, 19. A. R. SEEBASS, Secy.

Practitioners Club of Denver.—The Practitioners Club was organized October 1895, by the following professional gentlemen: Drs. Miel, Van Zant, J. J. Powers, Case, Macomber and Carl Johnson.

The distinct object of the Club being the moral, professional and social improvement of its members. The membership is limited to 30 and is confined to those of the profession engaged in general practice. There being no membership fee, election depends on one's moral and professional standing.

Members.—Drs. J. J. Powers, G. M. Macomber, J. N. Hall, Alfred Mann, C. B. Van Zant, A. G. Case, Carl Johnson, F. E. Warren, G. W. Miel, F. H. McNaught, Lydia Ross, Mittie Bradner, Jas. G. Field, Arthur Beavis, S. H. Jacobs, J. N. Thomas, H. W. Rover, C. B. Richmond, A. M. Holmes and A. S. Taussig.

During the past year twenty papers have been presented for discussion and ten cases of interest have been reported.

Regular meetings of the club are held on the first and third Tuesday evening of each month at the office of some member designated by the secretary to which visiting physicians are always made welcome. J. N. THOMAS, Secy.

The additions are the Practitioners Society of Denver, The Denver Clinical Society, limiting its membership to women and The Cripple Creek District Society.

No answer was obtained from The Fremont County Society and Aspen reports the death of its Society two years ago.

M. KLEINER, Chairman Com. Med. Societies."

Dr. E. C. Rivers of the Necrology Committee presented the following report:

The committee on Necrology is happy to report that only one death has occurred during the year past. That one was Dr. Jacob Reed, of Colorado Springs. His loss is a serious one to us. He was one of our senior members. In the early days of this Society he was one of our most energetic workers. Different from most of our senior members he kept among the workers up to the last. Not only did he prepare papers based upon his large and valuable experience and discuss the papers of others, but he was always ready to do the more disagreeable work of committees. This committee feels that our Society has lost a valuable member.

Dr. Denison reported the following as Chairman of the Com-

mittee on awarding of prizes for a literary essay on Microscopic Analysis of Blood, (read by the Secretary).

"Your committee entrusted at the last annual meeting with the award of a prize for the best essay on "The Diagnosis of Tuberculosis by Microscopic Examination of the Blood," beg leave through its chairman to report that there have been no discoveries or systems of technique submitted in competition for the prize, though the appointment of the committee was extensively made known. While not without hope of future success, your committee therefore beg to be discharged and that the obligations as to the award be hereby terminated.

CHARLES DENISON, Chairman.

Dr. Lobingier, as a member of the Committee for Memorial on Anti-Vivisection, reported the following in the absence of Dr. Denison, Chairman.

Your Committee appointed at the last meeting to protest in the name of the Society against the passage of Senate bill No. 1063 beg leave to report that the following communication has been duly presented to the U. S. Senate by our distinguished Senator, Henry M. Teller, who expresses the belief that the bill will not pass.

Respectfully submitted,

CHARLES DENISON, Chairman.

To The Congress of The United States.—The Colorado State Medical Society through its appointed committee, respectfully petition the Senate and House of Representatives not to hamper the Scientific investigation of Diseases by any such restrictive legislation as that embraced in Senator Gallinger's bill (Senate Bill 1063) "for the future prevention of cruelty to animals in the District of Columbia."

We believe that the action is unnecessary and harmful; that any complaints seeming to warrant it should be fully investigated before Congress is asked to interfere; and even then the great good to be accomplished through animal experiment should not be so overbalanced by the opposition of humanitarians, that the wonderful work now being done in our biological and pathological laboratories will be delayed or restricted.

We believe that it is through such laboratory investigations upon the bodies of inferior animals, that a correct understanding of disease is already dawning upon the medical mind, and that the possibility of an artificially pronounced immunity in the system of an effected person is not understood or desired by those who seek this restrictive legislation; otherwise they would appreciate the fact that all infectious diseases are alone controlled either by naturally or by artificially produced antitoxins and that these remedial

means are best determined by animal experiment. They would recognize that the nearly fifty per cent saving of life, through the use of the diphtheria antitoxin could never be a fact but for the previous poisoning and experimental treatment of guinea pigs, rats, etc.

The idea that the lives and sensations of such animals are to be compared in degree with those of human beings appears to us so unreasonable, unwise and absurd that we deem it timely to protest.

The enactment of laws to prevent the fisherman from using "live bait," the farmer from cutting an angle-worm with his hoe or plow, or the pedestrian from stepping upon an ant on the sidewalk, would be as reasonable as one providing that a guinea pig must be chloroformed before it receives a hypodermic injection, perhaps similar to what thousands of human beings are now receiving, happily through the knowledge obtained by animal experiment.

Appreciating these latter-day humane instincts, so advanced into power and influence by association and corporate means, nevertheless we estimate above them all (and wish that you the representatives of the people might do the same) the humane and self-sacrificing spirit of true physicians and scientists, also increasingly in evidence nowadays, who place prevention above the cure of disease.

Respectfully submitted,

THE COLORADO STATE MEDICAL SOCIETY.

By the Committee,

CHARLES DENISON, M. D.

A. STEWART LOBINGIER, M. D.

WM. J. ROTHWELL, M. D.

Dr. McClelland, Treasurer of the Society, followed with his report:

"Colorado State Medical Society, Denver, Colo., June 12, 1897.
—Your Treasurer begs leave to report the condition of your treasury, to-wit:

Balance on hand June 11, 1896.....	\$ 476.21
Receipts during current year.....	1090.00

Total.....	\$1566.21
Disbursements for current year.....	1252.20

Balance on hand.....	\$ 314.01
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All of which is most respectfully submitted for your consideration."

W. F. McCLELLAND, Treas.

The Committee on Publication reported the following, through its Chairman, Dr. Whitney:

"It is to be hoped that you have each received your copy of the

Transactions of 1896, and can therefore judge for yourselves as to the quality of the work. The committee feels that the standard of previous years has been in every way maintained. Two or three unfortunate errors in the list of members were simply a repetition of the same errors in the Transactions of the previous year. We would suggest that such and similar mistakes might be averted in the future if members concerned would call the attention of the incoming secretary to them immediately after the annual meeting.

The publication of the Transactions was considerably delayed by the prolonged absence from the city of several contributors and consequent delay in return of proofs. For the work of the publishers, Messrs. Smith Brooks & Co., and for their constant courtesy we have nothing but unqualified praise.

The edition of '96 was of 400 copies, about 300 of which were sent to members of the Society and the remainder to the various State Societies, National Association and some of the prominent Journals. Application has been recently made by the Chicago College of Physicians and Surgeons for a complete set of our Transactions. Since we still have many extra copies of the past five or six years which are now useless, we felt warranted in presenting such a set to the Chicago Library free of cost, also to the Library of Colorado College in response to a request for last year's volume made by the President."

Parke, Davis & Co., were given a vote of thanks for the beautiful flowers sent the Society, by their representative Mr. Wattles.

A motion prevailed that the reading of papers be limited to 15 minutes and discussions to 5 minutes each, according to the rule adopted last year.

The report of the Finance Committee was as follows:

"The Finance Committee has examined the books of the Treasurer and Financial Secretary and find their reports to be correct.

HOWELL T. PERSHING,
JOHN S. KELLY,
J. W. HIGGINS,
CARL JOHNSON,
A. J. ROBINSON.

Members of the Finance Committee.

The first paper of the session was read by Dr. Spivak on "The Ancient and Modern Instruments Used in Diagnosis and Treatment of Diseases of the Stomach" and was discussed by Drs. McLauthlin and Crouch.

Dr. Packard's paper on "Treatment of Potts Disease of the Spine," was discussed by Dr. Boice.

A motion was unanimously carried, to allow Dr. Fenton Turck, of Chicago, who was present, the privilege of the floor, apart from the regular program, for a short address on the "Diseases of the Stomach," with illustrations of his methods used on patients.

Dr. Love's paper on "Electricity in Diseases of Women," was discussed by Dr. Nichols.

Dr. Melvin, of Saguache, read a paper on "Progress Towards Accurate Therapeutics," which was discussed by Dr. Kleiner. Dr. Pedersen's paper on "Post Abortion Sepsis with Report of Cases," was discussed by Dr. Burns.

Meeting adjourned to meet at 2 o'clock.

TUESDAY P. M.

The first order of business of the afternoon was a paper on "The Radical Treatment of Hernia, with the Report of a Case," by Dr. Frank Finney, of La Junta, which was discussed by Drs. Corwin, of Pueblo, Nichols, Boice and Grant, of Denver.

The courtesies of the Society were extended to Dr. G. W. Harrison, of Albuquerque, ex-president of the New Mexico State Society.

Dr. Whitney opened the discussion on the paper read by Dr. Sewall, on "Clinical Uses of Stethoscopic Percussion," and Dr. Sewall closed the discussion.

This was followed by "Chronic Lead Poisoning," a paper by Dr. E. Curtis Hill, which was discussed by Drs. Liebhardt and M. Harrison, of Boulder.

Dr. Geo. W. Miel next read a paper on "Removal of Coal and Powder Stains from the Cuticular Integument."

Dr. Hershey opened the discussion on Dr. Bonney's paper, "What Inferences May be Drawn From Cases of Pulmonary Tuberculosis Reported to Have Originated in Colorado." The discussion was continued by Drs. Hall and Munn and closed by Dr. Bonney.

The next paper was by Dr. Beshoar, of Trinidad, on "Medical Customs of the Mexicans and Rocky Mountain Indians."

This was followed by a paper on "Puerperal Mastitis," by Dr. Liebhardt, which was discussed by Drs. T. E. Taylor, Burns, Marks, of Ft. Lupton and Whitney.

The courtesies of the society were extended to Drs. Stratton and Bottom, of Missouri.

"Two Cases of Tumor of the Cerebellum," was the title of a paper by Dr. Pershing.

Dr. Waxham's paper on "Prophylactic Treatment of Tuber-

culosis," was discussed by Dr. Munn, who was voted extension of time to finish his discussion, and by Drs. Sewall, Exline, Fisk and Beggs.

The session was then adjourned.

WEDNESDAY A. M., JUNE 16.

The day's program was opened with a symposium on "Inflammation of the Peritoneum."

Dr. Sol. Kahn, of Leadville, being absent, his address on the subdivision "Etiology," was read by Dr. Boyd, of Leadville.

It was decided to finish reading the papers before opening the discussions.

Dr. McHugh, of Ft. Collins, spoke on "Symptoms." Dr. Work, of Pueblo, on "Differential Diagnosis." Dr. Finney, of La Junta, on "Surgical Treatment." Dr. Stoddard, of Pueblo, (read by the corresponding secretary) on "Post-Operative Peritonitis," and Dr. Campbell, of Colorado Springs, on "Medical Treatment."

During a few delays on the program of the symposium, Dr. Boice presented a case of "Removal of the Right Half of the Upper Maxillary," and showed the very slight deformity remaining. The operation was done for the removal of an osteo sarcomatous tumor.

Dr. Simon also presented a paper, not on the program, on "Anaesthetics." It was largely discussed, Drs. Rogers, Miel, Edson, Whitney, Boice, Chas. Powers, Eskridge, Hall, Wetherill, Sewall and Jayne taking part in the discussion.

The discussion on the Symposium was participated in by Drs. Harvey, Fenn, of Colorado Springs, Spivak, Miel and McHugh.

This closed the morning's work.

WEDNESDAY P. M.

The afternoon session was opened by Dr. Eskridge's paper on "Difficulties in the Diagnosis of the States of Unconsciousness." He was allowed extension of time in which to read his paper.

Dr. Hall here gave notice of the proposed change in the wording of the constitution to make the words "and the approving votes of three-fourths of the members present shall be necessary to his admission" to read, "And the approving votes of 95 per cent of the members, etc."

Dr. Hall also moved that the chair appoint a committee of seven to submit a list of nominations to the Society, the list to contain three names of candidates for the principal offices. The motion prevailed.

A paper on "The Relation of Mal-Positions of the Macula Lutea

to Heterophoria," by Dr. G. M. Black was discussed by Dr. Le Mond.

Dr. Bane was granted sufficient time to read his paper in full, on "Diagnosis, Prognosis and Treatment of Mastoiditis." Its discussion was taken part in by Drs. Rivers, Gallaher, Dorland, of Pueblo, and Le Mond.

The president then announced the nominating committee of seven members: Drs. Hall and Hawkins, of Denver, Chipman, of Sterling, Melvin, of Saguache, McCreery, of Colorado Springs, Dawson, of Canon City, and Arbogast, of Breckenridge.

As Drs. McCreery and Arbogast were not present at the meeting the names of Drs. Robinson, of Aspen, and Harrison, of Boulder, were substituted in their places. It was advised that a preliminary meeting of this committee be held at once.

Drs. Black and Bane finished up the discussion on Mastoiditis, and Dr. Will Davis, of Pueblo, read his paper entitled "Some Practical Points Gathered from Sources Wise and Otherwise."

Dr. Campbell, of Colorado Springs, read a paper on "Character of Pulmonary Cases Sent to Colorado." Dr. Bonney discussed this paper.

Dr. Kate Lobingier's paper on "Chloroform in Labor," was discussed by Drs. Liebhardt, Hill, Sewall, Burns, Stedman, Marks, of Ft. Lupton, Kahn, of Leadville, and Taussig.

A paper by Dr. Boyd, of Leadville, on "Inequality of Pupils Observed at an Altitude of 10,250 Feet," was discussed by Dr. Black.

Dr. P. D. Rothwell was given the unanimous consent of the society to read his entire paper, the subject of which was "Puerperal Eclampsia." It was voted to postpone the discussion on this paper until the first thing Thursday morning.

The following report of the committee on Legislation was submitted and accepted:

DENVER, COLO., June 15, 1897.

"As chairman of your committee on medical legislation, I beg leave to report that a bill to regulate the practice of medicine in the state of Colorado was drawn and submitted to an attorney, and then presented to the legislature. The provisions of the bill you are more or less familiar with. The bill passed the house by just one majority. We hired an attorney to engineer the bill through the house, and a committee from the Denver and Arapahoe County Medical Society kindly raised the money to pay this attorney.

"The bill was then introduced into the senate. We here had a hard fight on our hands. The passing of the bill seemed only a question of work and money. By money we do not mean money

to buy votes, but money to pay men to stay right in the senate and with the different committees. The financial committee of the Colorado State Medical Society took it upon themselves to advance sufficient money for this purpose. The bill passed its first reading, was advanced on the calendar for second reading, and plenty of men and plenty of votes pledged to pass it in the senate by a good large majority. Unfortunately, a rangle over the Soldier's Home bill resulted in the legislature being talked out. Some good bills besides ours were, in this way killed. Even the bill for general appropriations was not passed.

"Our work this winter has convinced us that if the same kind of an effort is put forth two years from now, we will be able to get the kind of medical legislation we want, the kind we need.

"Your committee desires to thank the members of the profession generally for the generous and unanimous support in our work before the legislature last winter, and to especially thank the executive and finance committees of the Colorado State Medical Society and the Board of Censors of the Denver and Arapahoe County Medical Society for their good work. From no source did your committee receive greater help and encouragement than from our brother physician Senator Locke."

Respectfully submitted,

THOS. H. HAWKINS,

Chairman.

This closed the program for Wednesday.

THURSDAY A. M., JUNE 17.

Dr. Hall opened the day's literary program with a paper on "Physical Signs of Acute Bronchitis," which Dr. Beggs discussed.

Dr. Nichol's paper on "Operative Treatment in Dislocations and Fractures," was discussed by Dr. Leonard Freeman.

Dr. Parkhill's clinic was abandoned owing to a temporary illness.

The discussion of Dr. Nichol's paper of the previous day, was taken up by Drs. Hawes of Greeley, I. B. Perkins and Wetherill.

Dr. Kassler, of Topeka, was introduced to the society by Dr. Finney and the courtesies of the society extended to him.

Dr. Whitney's paper on "Importance of Diet in Infancy," was read by title.

Dr. Le Mond's paper on "Galvanism in Ulcerative Keratitis," was discussed by Dr. Boyd, of Leadville.

Dr. Sewall then read his report as secretary of the Colorado Medical Library Association. It was as follows:

The Colorado Medical Library Association was incorporated in June, 1893, with the objects, in the language of its by-laws, of the "establishment of a library and the accumulation of literature for the same, by purchase, gift or otherwise, for the diffusion of the knowledge of the medical arts and sciences."

The name chosen for the Association was intended to indicate that the Library was intended to meet the needs of the medical profession throughout Colorado, and, as the library now probably forms the greatest medical collection within at least, the radius of a thousand miles, its influence for good can only be measured by the use to which it is put.

The growth of the library is shown by the following statement:

Starting in 1893 with a few volumes of medical journals, a few antiquated medical books, the secretary's report for January 1, 1897, showed a collection of 4479 medical volumes, divided as follows: Books, property of Denver Public Library, 1559 volumes; Books, property of Colorado Medical Library Association, 398 volumes; Bound Medical Journals, property of Colorado Medical Library Association, 1332 volumes; Proceedings, Transactions, property of Colorado Medical Library Association, 1200 volumes; Health reports, etc.

Two months ago 81 bound volumes of medical journals were added to the list, completing two files of medical journals and completing within four volumes our file of the Index Medicus.

Dr. Huntington, Deputy-Surgeon General of the United States, has recently had selected from the duplicates in the great library over which he presides 9333 numbers of journals and 437 volumes of books and sent them to us in exchange for duplicates in our own collection. These journals are not duplicated in our library, having been selected according to a want list furnished by us. The gift includes the four lacking volumes of the Index Medicus which, with the Index Catalogue of the Surgeon General's Library, furnishes the greatest medical catalogue ever made. These additions will give us a total collection of about 2000 volumes of medical journals, 2450 volumes of medical books and 1200 volumes of transactions at the present date; or a total of about 5650 medical volumes.

This result has been the outcome of no little expenditure of energy on the part of the officers of the Medical Library Association.

The first important start was made through a munificent gift of literary material from the Boston Medical College. The New York Academy of Medicine then made a valuable donation of bound journals. Later on, chiefly through the friendly co-operation of

Col. Woodhull, Medical Director of the Department of Colorado, the Surgeon General and Deputy-Surgeon General of the United States have been interested in our success and enabled us to obtain most valuable material from the Medical Department of the Army.

The membership fee of the Association has been regularly paid by only about thirty resident physicians. It would have been impossible to have met the expenses of transportation, of binding and of subscriptions to current journals without the munificent money contributions of Drs. Fisk, Eskridge, J. W. Graham and the Colorado State Medical Society.

The monetary resources of the Association have hitherto restricted the subscription list of current journals to about 30 periodicals, but through private donations, notably on the part of Dr. T. H. Hawkins, an additional series of about 110 journals is currently received at the library. It would hardly be possible to mention all the sources of benefaction to the library, but the contributions made by Dr. Rivers have particularly added to its value.

Through the ingenuity and indefatigable devotion of Dr. Spivak the users of the medical library are now placed in command of a much wider range of medical literature than is represented on the shelves of the library itself. The plan pursued by Dr. Spivak has been to make a list of such medical books and journals or parts of journals which are in the private libraries of physicians of Denver, but not included in the property of the Medical Library Association; a card catalogue of these private works has been made and may be found in the reading room of the Medical Library in the High School Building. This catalogue includes 139 titles of medical journals, some of them not represented in the Medical Library and some completing files of journals already there. It also includes about 1500 volumes of medical books not found in the Library. By agreement of the physicians owning the indexed works medical investigators will have access to the private libraries at stated hours.

Drs. Fisk, Spivak, Munn, Melvin, Beggs and Lemen discussed Dr. Sewall's report.

As the committee on admissions was not present, the President named Drs. Robinson, Grant and Hopkins as such a committee.

It was voted that the Society appropriate from its funds \$200 to the Medical Library Association. It was also moved that Dr. Sewall constitute a committee of one to consult with School District Number One, with the view of securing a permanent assistant for the Medical Library.

Dr. Wetherill's paper on "The Use and Abuse of the Uterine Curette," was discussed by Drs. Nichols, Grant, Pedersen and Burns.

Dr. Rogers presented a case of a small boy upon whose foot he had operated.

The last paper of the morning was by Dr. Rogers on "An Abdominal Section on an Infant Sixty-four Hours Old." It was discussed by Drs. Wetherill and McArthur.

THURSDAY P. M.

The first paper on the program for the afternoon was an address by Mr. J. H. Pershing on "Some Controverted Points in Medico-Legal Matters."

The committee on by-laws reported the changes they had previously given notice of. After much discussion Dr. Fisk's motion to lay it on the table, was carried.

Dr. Hall then moved that the amendment referred to in Wednesday's proceedings, be taken up for consideration. Drs. Fisk and Pershing each objected to the amendment, and on its being put to the house, it was lost.

The President Dr. Levy's address was then listened to after which Dr. Grant announced that the meeting of the Western Gynaecological Association would meet in this city December 19, 1897.

Dr. Fisk announced in place of Dr. Graham, that the American Medical Association would meet in Denver on June 7, 1898, and spoke most enthusiastically over the securing of the convention for Denver, and also of Colorado's pledge of \$2,000 for the Rush Monument Fund.

Dr. Eskridge also spoke on the prospective meeting and on the Rush Monument Fund, and subscriptions were then taken to liquidate the assumed debt of \$2,000, pledged by Colorado. The following is a list of the subscriptions obtained at this meeting:

J. T. Eskridge.....	\$100.00	J. N. Hall.....	10.00
J. W. Graham.....	200.00	George Hamilton.....	10.00
L. E. Lemen.....	100.00	Jesse Hawes.....	10.00
S. A. Fisk.....	35.00	D. H. Coover.....	10.00
A. Stedman.....	50.00	G. M. Black.....	10.00
E. C. Rivers.....	100.00	H. B. Whitney.....	10.00
Leonard Freeman.....	25.00	T. J. Gallaher.....	10.00
W. W. Grant.....	50.00	J. K. Clark.....	10.00
R. F. Le Mond.....	50.00	M. T. C. Love.....	10.00
Henry Sewall.....	20.00	B. P. Anderson.....	25.00
Colorado Medical Journal.....	25.00	B. F. Wooding.....	10.00
T. H. Hawkins.....	25.00	C. D. Spivak.....	10.00
J. W. Dawson.....	25.00	S. D. Van Meter.....	10.00
C. K. Fleming.....	35.00	Laura Liebhardt.....	10.00

H. L. Taylor.....	10.00	Lillian Heath.....	10.00
Lee Kahn.....	10.00	E. F. Lake.....	5.00
R. L. Thorp.....	10.00	W. F. Shotwell.....	5.00
A. J. Robinson.....	10.00	E. C. Hill.....	5.00
P. J. McHugh.....	10.00	J. M. Blaine.....	5.00
G. B. Packard.....	10.00	P. E. Spratlin.....	5.00
Frank Finney.....	25.00	Wm. Beggs.....	5.00
Abijah Johnson.....	25.00	Adolph Zederbaum.....	5.00
W. A. Campbell.....	25.00	Lincoln Mussey.....	5.00
Jas. Hart.....	25.00	California Bldg.....	50.00
S. E. Solly.....	25.00	David Thompson.....	5.00
— — Dalton.....	10.00	S. D. Hopkins.....	5.00
P. R. Thombs.....	25.00	W. C. Bane.....	5.00
R. W. Corwin.....	25.00	J. P. Kelley.....	15.00
Hubert Work.....	10.00	Robt. Levy.....	15.00
W. H. Whitehead.....	25.00	Alumni Assn. Denver Medical	
Gross Med. Coll. Ass'n.....	25.00	College.....	50.00
H. W. McLauthlin.....	10.00	Alumni Assn. State School.....	25.00

It was moved that members present from counties outside of Arapahoe county, be constituted a committee to obtain subscriptions from each of their county societies. This motion was amended thus: "That it be left to the incoming President to appoint one member from each county society to raise subscriptions from their respective societies."

The following resolutions prepared by the executive committee were read:

"WHEREAS, The American Medical Association has elected to hold its next annual meeting in Denver, June 7 to 10, 1898, and this meeting is paramount in importance to that of this Society.

RESOLVED, That a meeting of the Colorado State Medical Society shall be convened for business only, June 6, 1898, and that its scientific program be merged with that of the American Medical Association.

RESOLVED, That this Society herewith approves the work done by the Committee, appointed by the Denver and Arapahoe Medical Society to invite the American Medical Association to Denver, and we pledge ourselves to do all in our power as a Society and as individuals to meet all expenses incurred and promote the best interests and welfare of the American Medical Association at its next meeting June 7, 1898.

The President is hereby authorized to appoint any committee that may be considered necessary and the Executive Committee is charged with the details of making these resolutions effective."

It was moved that the resolutions be adopted as the sense of this Society for the meeting in 1898, and that article 27 of the by-laws be suspended.

An amendment was offered that the word "adjourned" be substituted in the resolutions and call it an "adjourned meeting," and that the regular meeting be held as usual. After much debating on the subject, the original motion that the Society adopt the resolutions offered by the Executive Committee without the amendments passed the house.

The membership committee next reported that the committee passed favorably on the entire list of applicants and that a printed list would be submitted. The following names for admission were voted upon favorably, by the Society:

S. J. Hubbell, Fort Lupton; Adolph Zederbaum, Denver; J. E. Kinney, Denver; A. H. Goonett, Colorado Springs; M. Ballin, Leadville; Thos. J. Gallaher, Denver; P. W. Fisher, Walden; J. E. Cox, Hooper; John R. Espey, Trinidad; J. Welbie Cline, Georgetown; R. K. Hutchings, Colorado Springs; W. N. Beggs, Denver; W. W. Reed, Fowler; M. S. Chenoweth, Elbert; F. A. Wilmarth, Castle Rock; W. F. Singer, Pueblo; Carroll E. Edson, Denver; W. B. Fenn, Colorado Springs; A. Hunter, San Luis; E. C. Guthrie, Aspen; L. O. Maffett, Colorado Springs; Wm. C. Mitchell, Denver; J. N. Thomas, Denver; Chas. H. Call, Sedalia; B. B. Grover, Colorado Springs; G. E. Tyler, Denver; A. D. McDowell, Sopris; W. W. Rowan, Ouray; W. J. Rothwell, Hugo; W. H. Bergtold, Denver; D. Heimberger, Leadville; Dryden Johnson, Antonito; Alice T. Moore, Denver.

It was moved and carried that a committee of five be appointed by the incoming President, to collect medicinal herbs growing in Colorado, and make an exhibit of same for the meeting of the American Medical Association next year. It was also voted that the State Historical Society be asked to co-operate with this committee:

The committee on nominations presented the following list:

President.—L. E. Lemen, Denver; W. W. Grant, Denver; W. A. Campbell, Colorado Springs.

First Vice-President.—Frank Finney, La Junta; Will B. Davis, Pueblo; P. J. McHugh, Fort Collins.

Second Vice-President.—J. Tracy Melvin, Saguache.

Third Vice-President.—Mary H. Barker Bates, Denver.

Corresponding Secretary.—H. B. Whitney, Denver; C. K. Fleming, Denver; F. H. McNaught, Denver.

Treasurer.—W. F. McClelland, Denver; Jesse Hawes, Greeley; Lee Kahn, Leadville.

Recording Secretary.—Minnie C. T. Love, Denver.

Assistant Recording Secretary.—George Hamilton, La Jara.

Admission Committee.—T. A. Hughes, Denver; A. J. Robinson, Aspen; S. D. Hopkins, Denver; R. F. Graham, Greeley.

Drs. Grant and Campbell withdrew their nominations for President, and the secretary was instructed to cast the ballot for Dr. Lemen after which a rising unanimous vote was given for him.

The newly elected members were requested to register before voting.

The secretary was instructed to cast the ballot of the Society for all single nominations. As the nominees for treasurer and corresponding secretary were declined, by two of the three nominated, these positions were included.

It was voted that the war club used as a gavel by the President during this session be presented to him. Numerous "votes of thanks" for various things were taken.

The secretary cast the ballot of the Society for the Board of Trustees, which are to remain the same, except the name of Dr. Solly to be substituted for Dr. Reed and Dr. Eskridge for that of Dr. Lemen.

After the ballot for vice-president was announced the Society adjourned to meet at the call of the Executive Committee.

The following are the newly elected officers: President, L. E. Lemen, Denver; First Vice-President, Frank Finney, La Junta; Second Vice-President, J. Tracy Melvin, Saguache; Third Vice-President, Mary H. Barker Bates, Denver; Corresponding Secretary, H. B. Whitney, Denver; Treasurer, W. F. McClelland, Denver; Recording Secretary, Minnie C. T. Love, Denver; Assistant Recording Secretary, George Hamilton, La Jara; Admission Committee, T. A. Hughes, Denver, A. J. Robinson, Aspen, S. D. Hopkins, Denver, R. F. Graham, Greeley.

NEW COMMITTEES

The following committees have been appointed by President Lemen since the Society adjourned:

Executive.—Leonard Freeman, C. K. Fleming, W. A. Jayne, D. H. Coover, Jesse Hawes, J. N. Hall and Lee Kahn.

Publication.—H. B. Whitney, S. G. Bonney, G. B. Packard, W. J. Rothwell, Laura Liebhardt, Minnie T. C. Love and Kate Lobingier.

Finance.—Jno. Boice, E. C. Rivers, W. H. Davis, G. M. Black, George Law, R. W. Corwin and P. D. Rothwell.

Medical Ethics.—F. E. Waxham, E. R. Axtell, W. C. Bane, J. C. Herrick, W. R. Dorland, A. E. Bonesteel and M. Beshoar.

Sanitation and Preventive Medicine.—W. P. Munn, E. J. A.

Rogers, H. W. McLauthlin, H. L. Taylor, Frank Finney, Sol Kahn and P. J. McHugh.

Medical Societies:—Robert Levy, C. D. Spivak, I. B. Perkins, Eleanor Lawney, F. N. Carrier, S. D. Hopkins and Sard Weist.

Necrology:—W. E. Wilson, T. G. Horn, George Law, Charles Denison, C. B. Lyman, S. D. Van Meter and Clayton Parkhill.

By-Laws:—W. W. Grant, P. J. McHugh, Hubert Work, W. A. Campbell, Bond Stowe, F. H. McNaught and H. G. Wetherill.

Legislative:—W. A. Campbell, T. H. Hawkins, P. V. Carlin, A. Stedman, L. T. Durbin, T. A. Hughes and S. E. Solly.

Rush Monument Fund:—J. T. Eskridge, E. R. Axtell, J. W. Graham, S. A. Fisk, Leonard Freeman, T. H. Hawkins and Jas. Hart.

The following delegates to the American Medical Association, for 1898, have also been appointed:

Delegates:—Jno. M. Foster, E. R. Axtell, Hugh Taylor, S. E. Solly, C. F. Gardiner, D. H. Coover, J. W. Dawson, H. G. Wetherill, M. Harrison, S. D. Hopkins, Frank Finney, H. W. McLauthlin, B. P. Anderson, Robert LeMond, Hubert Work, S. G. Bonney, Lee Kahn, C. A. Powers, W. W. Bulette, E. P. Hershey.

Alternates:—W. H. Buchtel, Laura Liebhardt, S. D. Van Meter, George Hamilton, H. C. Crouch, J. C. Chipman, R. F. Graham, A. S. Lobingier, Jno. F. Elliott, J. L. Fierstone, J. K. Clark, F. B. Crocker, John Gould, Rilla G. Hay, J. W. Higgins, A. M. Maclean, Alicia F. Jeffery, Thomas G. Maghee, E. C. Hill; W. T. Little.

EXHIBITORS.

The Exhibitors who added to the attractiveness of the last meeting were numerous and bustling. Many of our old friends were present and with them were a great number of new men. Each year the exhibits increase in number and are of more value to the visitors. As usual, Mr. S. S. Hatfield was there in the interest of Wyeth, and Mr. G. C. Wattles made things hum for Parke, Davis & Co. E. Fougere had a nice exhibit, and Mr. Bateman was there in the interest of Eli Lilly & Co. Dr. Wallace and Mr. Clark were present with infant foods. Our local men, J. Durbin, The Ford Optical and Surgical Co., C. H. Howe & Co., The Medical Book Co., Idaho Springs and Colorado Lithia Water Co., were all present with well arranged displays. The Barbee Whiskey Co., Seale and Hereth, The Mellier Drug Co., Upjohn Pill Co., The Yale Chair Co., were all there. Last but not least The Colorado Medical Journal had on display its June number and gratuitously distributed over 500 copies.

ENTERTAINMENT.

The entertainment provided for the guests at the meeting was very well carried out, although the much promised "surprise" failed to materialize.

The evening of the first day was given over to a reception at the Brown Palace Hotel, and the night being cool added much to the evening's pleasure. These receptions are growing to be more of a "reunion" where old associates meet to renew old acquaintances and to form new ones. The fraternal spirit among the doctors is very marked and the tendency is much toward "clanishness."

On Wednesday evening, the members were guests of President and Mrs. Levy at a theater party at Manhattan Beach, where they were pleasantly entertained by both "man and beast." After the theater, refreshments were served at the cafe and special cars waited to take the crowd home from a very pleasantly spent evening for which many thanks are due to the host and hostess.

On Thursday evening occurred the annual banquet to the visiting doctors, and the Brown Palace Hotel Company carried out their well deserved reputation for looking well after the inner man at a banquet. Dr. Leonard Freeman proved a royal toastmaster and it was a pleasant wind up to the Twenty-Seventh Annual Session of the State Medical Society.

NOTES.

Electric fans are needed in the Ordinary.

Dr. Spivak's collection must be extended and displayed at the American Medical Association.

The Colorado Medical Journal, Vol. 1, No. 1, as it appeared in 1882 under the editorship of Dr. Warn was on exhibition in Colorado. Only one number was issued at that time. Dr. Warn its editor died a few months after its appearance.

The crowd at Manhattan Beach laughed good humoredly at the jokes perpetrated by the company upon the Denver doctors but the word "joke" is a misnomer for this part of the program had obviously not been given much thought.

A suggestion. When an assembly meets in a room with a tiled floor, the ailes ought to be carpeted. This for the Executive Committee for next year.

There are four subjects that every doctor thinks he can say something on and if one wants his paper discussed he must write either on Tuberculosis, Typhoid, Diphtheria or Anaesthesia.

Those who attended the banquet and listened to the flow of wit and wisdom were: Guests,—Dean Hart, J. H. Pershing, Drs. Campbell, Colorado Springs; Melvin, Saguache; Hamilton, La Jara; Fin-

ney, La Junta; Lee Kahn, Leadville; Hunter, San Luis; Hawes, Greeley; Col. Woodhull, Denver; Major Munn, Ft. Logan; Call, Sedalia; Boyd, Leadville; Kelly, Golden; Rothwell, Hugo; Harrison, Albuquerque; McArthur, Littleton; Fenn, Colorado Springs; Hutchinson, Florissant; Johnson, Antonito.

Denver Physicians: L. Freeman, Levy, L. E. Lemen, Graham, Hawkins, Pershing, Hall, Fleming, Whitney, Boice, Lobingier, Powers, Hopkins, Blaine, Bonney, Munn, Case, Hershey, Packard, LeMond, Rogers, Grant, Black, Fisk, Mager, Lyman, Herrick, R. B. Freeman, W. C. Davis, Macomber, P. D. Rothwell, Macphatter, Handford, Gallaher, Van Meter, Hyrup-Pedersen, I. B. Perkins, Sheets, W. H. Davis, McNaught, Durbin, Neuman, Spivak, Wood, Rivers, O'Connor, Bagot, Coover, Jayne, Carlin and Kinney.

SOME INTERESTING SURGICAL CASES. *

By ROLLA LOUIS MCCREERY, M.D.,
Colorado Springs, Colo.

County Physician of El Paso County.

The cases which I present in this paper are interesting in many ways. Cases like 1 and 2 are frequently seen in the hospital practice of any busy surgeon, while cases similar to 3, 4 and 5 are quite rare even in a large hospital service. This serves to make them all the more interesting.

CASE I.—EXTRADURAL HEMORRHAGE.

E. M., aet. 44, sculptor, was brought to the County Hospital from Manitou during the night of February 25th with the following history: About 3 p. m. on February 25th he had been drinking in a saloon and being ordered out, refused to go, whereupon he was struck upon the head with a club by the bartender. This blow rendered him unconscious within a half-hour. I first saw him about 9 a. m., February 26th. Found him completely unconscious, pupils dilated and not responsive to light, the left pupil being the larger, skin warm and moist; breathing stertorous and rapid, about 42 per minute; pulse slow, full, compressible and irregular—about 64 per minute. Urine and feces had been involuntarily voided.

Upon examining the scalp I found two deep cuts involving the entire thickness of the scalp. Whenever an attempt was made to explore these wounds convulsions would occur, involving the upper extremities, and breathing would become more rapid and labored. The larger cut was over the left parietal eminence, about $1\frac{1}{2}$ inches

* Read before the El Paso County Medical Society, December 9, 1896.

long, beginning posteriorly at a point about $3\frac{1}{2}$ inches above the left external auditory canal, and extending forward toward the outer canthus of the left eye.

The smaller cut was V-shaped and about one inch long. It was situated over the anterior superior angle of the left parietal bone, —the point of the V pointing forward. Through these cuts no injury to the bones could be detected. At 4:00 p. m., his condition remaining the same as just described, I called Drs. Campbell and Hart in consultation and it was decided to trephine at once. Ether was administered.

The two cuts upon being elongated toward and joining each other formed two sides of a triangle, the base of which was posterior. A $\frac{1}{2}$ inch trephine was used and entrance was made $3\frac{1}{2}$ inches above and $1\frac{1}{4}$ inches in front of the left external auditory meatus. The skull was unusually thick at this point, being $7\text{--}32$ of an inch thick. As soon as the button was removed, a large blood clot located between the bone and dura mater was found which filled the cavity and transmitted the pulsation of the brain.

About a tablespoonful of this clot was removed. The effects of this relief from pressure was at once apparent as the breathing became slower and less labored in character and the pulse steadier. Drainage was made with a strip of iodoform gauze. A few stitches were taken to close the scalp wounds, except over the hole in the skull. Dressing of iodoform gauze was used. Operation lasted 45 minutes. February 27, saw him at 9:00 a. m. He was still unconscious, but the nurse said he attempted to open his eyes occasionally. There was ptosis of left eyelid. Pupils almost normal and equal and responsive to light. Respiration 40; pulse 72; temperature $100\frac{3}{4}$ F. Dressings were quite moist and blood stained. Washed wound with bichloride solution 1-2000. Fresh drainage was applied. Patient swallowed voluntarily when water was placed to his lips. During the afternoon he was fed one ounce of milk.

February 28, saw patient at 8:30 a. m. Had been restless all night; was still unconscious. Pupils normal and eyes open. Ptosis of left eyelid still remained; also slight paralysis of right arm. Respiration 28; pulse 84; temperature $99\text{--}4\text{--}5$ F. Dressings were moist and wound had a healthy appearance; washed and dressed as before. Since my last visit on the afternoon of the previous day, he has been fed six ounces of milk.

Saw him again at 4:15 p. m. Had not regained consciousness. Pulse 140; respiration 56; temperature $104\text{--}2\text{--}5$ F. Removed stitches and examined wound thoroughly. Found slight sloughing of wound posteriorly. Removed about a teaspoonful of the clot.

Washed wound thoroughly with carbolic acid solution 1-20 and then with peroxide of hydrogen and dressed as before.

February 29, 9:00 a. m., the patient was still unconscious. Respiration 42; temperature $103\frac{1}{2}$. Could not count the pulse owing to lack of volume, and heart beat could not be distinguished. Wound was treated as formerly. Patient died at 10 a. m.

Post Mortem Notes.—Found body of a strong well built man about 44 years of age; weight 160; height 5 feet 9 inches. Body in good state of preservation. Found no marks of violence on body or extremities. On left side of head over parietal region found a large V-shaped incision in scalp involving its entire thickness; owing to slight retraction of its edges, a portion of the skull, the left parietal bone was exposed. The edges of the wound looked healthy. The wound had been dressed with iodoform gauze and a strip was removed from under the scalp. This was evidently placed there for drainage. Upon laying bare the skull, found a small round hole $\frac{1}{2}$ inch in diameter made by a trephine. This hole was $3\frac{1}{2}$ inches above left external auditory canal and $1\frac{1}{4}$ inches in front of a line drawn over the top of the head between the two auditory canals. A crack, beginning 1 inch in front of this hole and running backwards and downwards and through this hole, was detected. It extended entirely through the skull. Upon opening the skull found a large blood clot, filling a tea-cup, 5 inches long by 3 inches wide and from $\frac{1}{8}$ to $\frac{1}{2}$ inch thick. This extensive clot was located under the parietal bone and was caused by a rupture of the anterior branch of the middle meningeal artery. Upon removing the dura mater an inflamed and disorganized area on the brain, about the size of a 50 cent piece was found. This area was about $\frac{1}{2}$ inch posterior to where the hole in the skull was made. The right side of the brain was inflamed and its coverings congested.

CASE II.—COMPOUND FRACTURE OF TIBIA.

J. C. S., Male aet. 17, was brought down from the mountains on July 22, 1896, suffering from what his physician called a compound comminuted fracture of the left tibia. The fracture was received sometime during the previous day. The doctor reduced the fracture using all the antiseptic measures at his command. The patient was taken to the St. Francis Hospital and the wounds examined under chloroform.

Found two wounds about the middle of the leg, through the upper one of which could be felt the ends of the fragments overriding, but upon proper extension being made this was easily corrected; no communication could be detected. The wound was thoroughly washed out with bichloride solution 1-2000; the extremity

placed in a fracture box and extension applied. This extension was too painful so it was discontinued until next day, then reapplied and allowed to remain until the 27th when upon examination it was found that there was over-riding of about $\frac{1}{2}$ inch. On the 28th the extremity was encased in a plaster of paris bandage. The wounds were washed every alternate day with 1-2000 bichloride and remained clean and had a healthy appearance and seemed to be healing. One week later (August 4) the cast being found quite loose, a new one was applied. The wounds healed readily with the exception of the lower part of the lower wound. Here there was for a week some sloughing of the tissues and the bone was exposed through a very small opening. The temperature remained normal. There was an uninterrupted convalescence and patient was sent east on September 15, 1896.

CASE III.—COMPOUND FRACTURE OF HUMERUS—AMPUTATION AT SHOULDER.

Geo. D., aet. 41, was brought to the County Hospital March 31, 1896, with the following history: On March 30th, about noon he was driving a heavily loaded ore wagon. The seat spring broke, throwing him to the ground in front of the wagon. The wheel passed over his right arm above the elbow, fracturing the humerus at the juncture of the upper and middle thirds and producing a compound fracture. He lay for some hours before being found. When found he was taken to Victor and filled with "bad whiskey." The arm was bandaged and he was sent to this city.

Upon examination, 30 hours after the accident, I found the bone crushed; the arm badly swollen and a hernia of the biceps muscle on the inner surface of the arm; there was a small cut on the outer surface of the arm through which the ends of a ligature protruded. What vessel was tied by this ligature, I could not determine. There was no pulsation detectable of either radial or ulnar arteries at the wrist, though forearm and hand were warm. Upon pressure over the seat of fracture, crepitus could be elicited and through the cut, gas and blood escaped. He complained of pain in the right chest over the nipple and said his horse kicked him when he fell. There was no discoloration to be seen. In the axillary and subaxillary regions there was some oedema and redness. Around the hernial opening, the skin and tissues were greatly discolored showing that a severe inflammatory process was going on beneath the skin. The treatment temporarily consisted of daily injecting carbolic acid solution (1-20) into the arm at the seat of injury, bandaging arm and giving morphine for the pain. This treatment was continued until the afternoon of April 3 when a

mottled appearance of the hand and arm, denoting gangrene, was noticed. Owing to the unsanitary and exceedingly septic condition of the County Hospital, patient was removed to the St. Francis Hospital immediately and the operation was set for the next day at 10 a. m.

For valuable assistance I am indebted to Drs. Campbell, Hart and Christopher. On account of so much swelling and oedema in the neighborhood of the joint all hopes of securing good healthy flaps were abandoned. A strong piece of rubber tubing was thrown around the shoulder in such a manner as to constrict the vessels in the axilla. We followed Larry's operation as far as possible. As the bone was fractured five inches below the head a primary amputation was made at this point. Then with a strong pair of bone forceps the stump was firmly grasped and in this way a leverage was obtained. The limb was held from the side and an incision made down to the bone, the incision beginning just below and in front of the acromion and running down the outer surface of the arm. From the center of this incision an oval incision was carried around the arm, the inner aspect of the oval reaching as low as the lower end of the vertical cut. The anterior structures were first divided close to the bone and the posterior structures next. Disarticulation was then readily performed. The remaining attachments of muscles, subscapularius, supraspinatus and infraspinatus and teres minor were then divided. The vessels were tied with heavy silk ligatures, the nerves drawn out and cut and the wound sewed up vertically; drainage was made through rubber tubing and with the assistance of the ligatures which were left long and protruded through the lower end of the incision. The patient suffered little shock. He was given whiskey, a tablespoonful every two hours, quinine sulphate gr. ii every three hours and morphine gr. $\frac{1}{4}$ at night. After three days he was given elixir calisaya with iron, a tablespoonful with each meal.

The temperature never rose above 102° F. Wound was dressed daily, washed with bichloride solution 1-2000 and dusted with iodoform. On the eighth day the ligatures came away. He has had no rise of temperature and with the exception of a slight delirium one night, his recovery was steady and without complications. He was removed to the County Hospital at the expiration of four weeks and discharged from there on August 27, 1896, almost five months after his admission.

CASE IV.—GUNSHOT WOUND OF HUMERUS HIGH UP—RESECTION OF HUMERUS.

P. M., 46, section hand, was admitted to the hospital on the

evening of October 6, with the following history: On the evening of October 4, as he was going from the depot to the bunkhouse he was shot with a 45-90 winchester rifle by a man who mistook him for a burglar. The man was not over ten feet away from him. The ball entered the right shoulder, fracturing the humerus about $\frac{3}{8}$ inch below the neck, passing out posteriorly. As he was about eight miles from town some time passed before a surgeon could be procured. Bleeding was quite profuse. The medical man, a homeopathist into whose hands he fell, told him (after he had operated on him) that he had tied some bloodvessels and removed several pieces of bone.

On his admission to the hospital his condition was as follows: Pulse rapid, 104, full and strong. Respiration hurried. Temperature 101° F. He was quite weak and complained of intense pain in right shoulder. On exposing the wounds a great deal of greenish yellow, foul smelling pus was found. On the anterior surface the original wound of entry was found to be about 1½ inches long and had been extended downward by a knife about 5 inches and had been sutured with silver wire. The wound of exit would admit my little finger. The arm down to the elbow was swollen, very painful and slightly discolored. Wounds were thoroughly washed out with 1-1000 solution of bichloride of mercury followed with peroxide of hydrogen. Strips of iodoform gauze were packed into the wounds to act as drainage. He was placed in bed and morphine ordered if necessary to relieve pain.

On October 7, wounds were dressed the same as on the previous day; rubber drainage tube was omitted. I removed upper and lower wire suture. The pus was not so ill-smelling as before. The patient said he passed a very comfortable night; had slept some and was hungry at breakfast time. This mode of treatment was continued. The swelling gradually disappeared from the arm and patient seemed to be doing well. On the 17th a third silver wire suture was removed as it seemed to be more of an irritant than a support. During the night of the 18th, 12 days after admission there was quite a good deal of hemorrhage. I think this was venous oozing. There was a slight oozing on the following day.

On the 22nd a small sinus was found where this last suture was removed, this ran inward and upward and communicated with the bone. The patient on the 24th seemed to be weaker, his temperature 101-3-5; pulse good; appetite good. He had had no morphine, epsom salts had moved his bowels. Was placed on Elix. Calisaya and iron $\frac{3}{4}$ t. i. d. As his condition was not improving on the 26th, I asked Drs. Campbell and Hunter to see the patient with me.

A resection of lower fragment of humerus with removal of head from the glenoid was decided upon.

October 27, operation was as follows: After washing wounds with 1-2000 bichloride followed by geoline solution, an incision 7 inches long extending from tip of the acromion process downward along the outer surface of the arm through the deltoid muscle to the bone, was made. It was found that about one inch of bone was missing, the head being intact, the upper extremity was badly shattered for three inches. The tissues were found to be in fair condition, but a quantity of pus was encountered around the ends of the bone. The head of the bone was removed. The shaft was resected at about the middle; altogether 6 inches of bone was removed. The bleeding vessels were few in number and were ligated with silk sutures. Drainage was made through the posterior wound (made by the bullet) by means of a rubber drainage tube and through the operation wound by a strip of gauze. The posterior wound was left open, the others were closed by silk sutures. Ether was used. Time 45 minutes. Shock was quite sharp. Patient complained of no pain. Next morning he was bright and wanted something to eat. Discharge was slight, barely enough to moisten the dressings. The stitches were removed the 11th day. Discharge has persisted, but now is almost nil. Since the operation the temperature has risen once to 103-5. No pus sack could be discovered. As this showed only once it must be regarded simply as an incident. He has good use of his foreman, the nerves and blood supply being unimpaired.

CASE V.—CHRONIC SYNOVITIS.

T. L. Miner, aet. 52, was sent down from Cripple Creek in March 1896, with following history: About six weeks previous he first noticed that his right arm was becoming weaker. About two weeks after he noticed that the right shoulder was larger than before and from that time had constantly increased in size. There was no pain in shoulder and had never been. He does not remember having had rheumatism or of having received a blow thereon. Upon examination I found the shoulder to be quite large over the deltoid and pectoralis major muscles on the right side. There was a distinct sense of fluctuation over this swelling in the immediate region of the shoulder joint. The arm could not be abducted, showing that adhesions had been formed in the joint. I introduced a trochar and canula and drew off about twelve ounces of a brownish colored, tenacious fluid. I regret very much that I did not keep a sample of this for microscopical examination. I made a diagnosis of chronic synovitis with thinning of capsule. The arm was com-

pletely immobilized for three days after which one pint of the same fluid was drawn away. This operation was repeated twice in six weeks, the amount of liquid being less at each subsequent sitting. In May the swelling had been greatly reduced; that over the pectoralis major muscle being oedema caused by pressure. Then upon moving the arm it was found that the head of the bone was displaced downward about $1\frac{1}{2}$ inches, and was freely movable in all directions. I did not think the case one for operation, certainly not a radical one, and after about three months in the hospital he became tired of "loafing" as he expressed it and left.

In September I learned that he had been operated upon in Cripple Creek, and it was found that the head of the bone was entirely necrosed together with a portion of the glenoid cavity, the capsule and a part of the biceps tendon. About $\frac{1}{3}$ of the humerus was resected. After this operation healed he was able to resume his occupation, that of miner.

ADDITIONAL NOTES TO CASE V.

In December, 1896, the man presented himself at the hospital the second time. Upon examination I found his condition to be about the same as I found him in March. There was a linear cicatrix extending from the tip of the acromion down the outer aspect of the arm and about 4 inches in length. At the lower end of this cicatrix was a sinus communicating with the joint. A second sinus opened posteriorly 3 inches below the tip of the acromion. The patient complained of pain in the joint. It was now quite evident that the Cripple Creek operation was not as extensive as reported, for the head of the humerus could be felt, and attached to the upper third of the humerus was a hard firm tumor. This tumor seemed to be attached firmly to the bone about one inch below the neck. This was about $2\frac{1}{2}$ inches in length, $1\frac{1}{2}$ inches in width and $\frac{3}{4}$ inches in thickness.

The patient consented to an explorative operation, and this was done on December 24, 1896. The joint was opened along the line of the old scar. The tumor proved to be a sesamoid bone in the short head of the biceps muscle and was attached to the shaft of the humerus by adhesive hands. It was with difficulty that this was detached. Around the joint was a mass of adhesions which was broken up; capsule seemed to have entirely disappeared, owing to the degenerative process. No pus was found. The head of the bone was normal in appearance, but the shaft was somewhat roughened.

The cavity of the joint was flushed with bichloride solution 1-2000. Gauze drainage was made and the wound closed. Three

days afterwards the wound began to ooze, and this condition persisted for three days. After this, healing was uninterrupted. He was discharged two weeks after the operation.

In March he again came to the hospital, complaining of pain in the joint and a discharge from a small sinus 5 inches below the tip of the acromion and communicating with the joint cavity. He was turned over to my successor, who reports no further progress in the case other than washing the joint through the sinus every two or three days with a solution of carbolic acid.

In a recent conversation with the patient, I found that he was formerly a coal miner, and it was his habit when at work to lie upon this shoulder for several hours at a time, using this arm in hammering. The pressure and exercise had undoubtedly been the prime factor in starting this trouble.

News Items.

Dr. G. H. Stover has returned from a post-graduate course in New York and Baltimore, and will locate in Denver in the Jackson Block.

Dr. A. R. Seebass is home from a trip to Germany where he visited his old home and did some "brushing up" on his profession at Heidelberg.

Dr. Munn, in his conscientious work in the City Health Department, overtaxed his strength and was housed up with a ulmonary haemorrhage for some days. We are glad to see him about again.

The month of June chronicled a happy event for Dr. A. E. Bonesteel, of Central City, when he took for a bride, one of Central's wealthiest and most winsome bells. Our congratulations are extended.

The following extract from a letter from Dr. Bull, of Grand Junction, is the kind that strikes home to the heart of the editor: "THE JOURNAL is 'all right' and deserves the hearty support of all regular Colorado physicians."

Our August number will contain five or six short papers and a great deal of interesting matter, left over from this month. We feel sometimes that we ought to make this JOURNAL a fortnightly visitor. It is too bad to let good material get the least bit stale.

We would like to know from our readers if the complete report of the State Medical Society is of as much interest to them as a series of papers would be. It is a question that the editor cannot solve.

The State Medical School Question Settled.

The medical school question in Denver is beginning to simmer down and at this time it seems probable that there will still be two regular medical schools in this city. The decision of the Supreme Court in declaring that the State Medical School must return to Boulder, Colorado, is a decision that will stand for many years as an authority. A clearer cut decision is seldom handed down by a Supreme Court: "If the Regents have the power to remove a part of any of the departments of the University, it follows that they have the power to remove the entire department. If they have the right to remove one entire department, they also have the power to remove all, or such of the departments as they may determine. To say that they have any such power should be equivalent to declaring that they might remove the entire University from Boulder and thus override the constitution itself and render nugatory the efforts of those by whom the location was secured. The fact that the Regents keep their business office in Boulder, that commencement exercises are held there, and diplomas awarded and fees received and accounts kept there, is not a compliance with the mandate of the constitution that the University located at Boulder is the University over which they have supervisory power. To retain the shell at Boulder, while the real work of the University, or any of its integral parts, is done elsewhere, would be an evasion of the letter and spirit of statutes and constitutions.

"The judgment of the District Court, therefore, is reversed and the cause remanded with instructions to grant the writ prayed for by the relator, excluding the defendant corporation from exercising the franchise of teaching medicine at Denver."

Since the decision, the members of the State School have resigned in a body and this action has left them free to follow their inclinations for their best interests.

Invitations were extended to the various professors to join the faculties of the two remaining regular schools, which have been excepted by the majority of the professors, while a minority of the number have decided to remain outside of college work for the present. This will enable the two schools to do the very best work possible, making competition on a much more fair basis than it was heretofore and also giving a corps of teachers in either school that can well vie with the other in point of perfection. The standard of medical graduates ought to be considerably raised, and thus Denver's place in medical education be all that it should be.

Wife—"Where are you going, John? Its getting very late."

Husband (who has been reading a patent medicine almanac)—
 "I'm going to see a doctor if I live to find one."

THE COLORADO MEDICAL JOURNAL.

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EDWIN R. AXTELL, M. D., EDITOR.
E. A. SHEETS, M. D., MANAGER.

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VOL. III.

DENVER, COLO., JULY, 1897.

No. 7.

Editorial.

The American Medical Association.

One who takes a trip two-thirds of the way across the continent to a gathering of this kind must needs be exceedingly well rewarded for his effort, or he is sure not to be fair in his criticisms, and imagine the whole thing a failure. But he who would pass judgment upon the Philadelphia meeting as a lacking of success, is indeed a veritable cynic.

Philadelphia is amply capable of handling so large a crowd, comfortably and the hotel people were undoubtedly "primed" for "a rake off" since the prices in hotel accommodations went up like a thermometer these July days. The committee of arrangements probably were not to blame for this, but it is one of the criticisms we have to make upon an otherwise hospitably disposed city.

The various section meetings were conveniently scattered over a small space and close to headquarters. So much has been said through the daily papers and medical literature about this meeting that details are not necessary. The universal opinion is that the jubilee meeting on the fiftieth anniversary of the society's founding, was a success numerically, scientifically and socially considered.

The red tape necessary to registration should be facilitated in some way so that it would not be necessary for one to stand in line for three hours as did one of our friends.

The general meetings which were presided over by Dr. Senn, were interesting, although we heard it whispered that Dr. Senn makes a better surgeon than a presiding officer.

The various lunches, dinners, receptions and theater parties, were a pleasant recreation from the heavy work of the day's scientific program. It is even told of one economically disposed member, who did not suffer at the hands of the hotel men, that the exhibit hall furnished bromose, imperial granum, various excelsior health foods and White Rock Ozonate Lithia Water, for breakfast and with the luncheons and dinners which were served each day to the members, this man's board bill was "nit."

The general meeting in which the Rush Monument Fund was so enthusiastically subscribed to, was one of the greatest interest to Coloradoans. Dr. J. W. Graham, of Denver, generaled the movement so admirably and successfully that Dr. Gihon's long cherished wish is now to be gratified, and we feel that crédit is due to no one, equal to that of Dr. Graham. He proudly put Colorado at the head of the list for a \$2,000 subscription and the other states had to fall in line.

The fight for the 1898 meeting of the association was conducted by Colorado's delegates in a dignified, business-like manner and their success attests to the work which they did. All honor to them.

The almost unanimous choice of the convention for president was Dr. Geo. Sternberg, Surgeon-General U. S. A. Dr. Graham was appointed chairman of committee on arrangements. Dr. W. A. Jayne, of Denver, was appointed assistant secretary.

The trip to Atlantic City was a fitting close to a delightful vacation, and the hospitality of the hotels and attractions of the resort for twenty-four hours with a sail on the Ocean, was extended through the courtesy of the Atlantic City Medical Society.

It was a successful gathering.

† † †

Colorado State Medical Society.

It is the unanimous opinion of the members that the last meeting of this association was a most successful one, in every particular and fully up to the standard of its predecessors in scientific and social interest. The attendance from outside of Denver was hardly up to the usual number and at times some of the sessions were poorly attended. The arrangement of all details in connection with the meeting had been carefully attended to by the executive committee and there were no serious hitches.

The arrangement of the papers without regard to classification

was, in our judgment, a poor one. If papers could be read at a certain definite hour this arrangement would answer. But as this seems to be impossible, the program as arranged was certainly unsatisfactory.

As usual, the Ordinary of the hotel was hot and poorly ventilated. The old story of too many standing up and talking in the back part of the room was again repeated. The ideal meeting place for such a gathering as this, would be a hall provided with receiving rooms where registration and social enjoyment would not interfere with the program.

The collection by Dr. Spivak of rare books and instruments owned by members of the association was one of the best features ever introduced at our association. It ought not however to have been in the assembly room.

The papers presented were varied and interesting and many showed evidences of careful study. The general discussion this year was of a higher character than it has been in times past owing to the previous appointment of some one to open the discussion. It is an excellent plan and deserves to be continued. Whether the discussion was not abbreviated somewhat by the president's ruling that all speakers must come forward to the stenographer's desk is a question. It is the general discussion of papers that promotes the greatest interest. Many modest men with ideas which a few words could express remained silent rather than walk up to the front of the hall. The stenographers table could have easily been placed in the middle of the room.

As a presiding officer Dr. Levy was a success. It is true that there were no trying situations to handle, but we feel sure that they could have been fully met.

The enthusiasm displayed by the association in regard to the Rush Monument Subscription shows how thoroughly in earnest the members are to redeem the pledges of their delegate and to give notice to the American Medical Association that Colorado will right royally welcome its meeting in 1898.

The new President-elect Dr. L. E. Lemen was the man who at the American Medical Association told the Ohio Delegation—who had a map prepared showing how close Columbus, Ohio, was to all the large eastern cities—that the Colorado Delegation didnt need a map to show where Denver was. He worked arm in arm with our champion Dr. J. W. Graham and largely to their united efforts was the Association brought to Denver. The honor was well bestowed. Dr. Lemen will give to the position, dignity, interest and ability.

The decision that our meeting next year be a purely business one was well made. It is enough to have the American Medical Association here. Already the enthusiasm over this meeting is at a glowing heat. If Colorado doesn't set a pace for the entertainment of this Association it will be very strange. The present outlook betokens great things.

Book Reviews.

SYRINGOMYELIA:—An essay which was awarded the Alvarenga prize of the College of Physicians of Philadelphia for the year 1895. By Guy Hinsdale, A. M., M. D. P. Blakiston, Son & Co.

The author is to be congratulated on the manner in which he presents this subject and the amount of literature to which reference has been made. Total 514 cases.

The bibliography is complete and of value, containing 388 cases.

The diagrams of the spinal cord in the section on pathology are excellent, and shows the various lessons to great advantage. In this section the author describes in full the method in which the central canal of the spinal cord enlarges, and calls attention to the fact, that the canal is not enlarged in all cases, but is obliterated by gliomatous tissue. This is an important point to remember, as a great many members of the medical profession, are of the erroneous opinion that the central canal is always dilated and empty.

In 62 per cent of the cases of this disease, the posterior horns are affected, and it is exceptional for the pressure to be exerted laterally. The muscles of the lower extremities are not affected as much as the upper.

Fibrillary tremor was found 30 times in 118 cases. Arthropathies in 38 per cent of cases and shoulder and elbow joints the most frequent positions. The origin of these arthropathies is analogous to those in tabes.

Fourty-four cases of deviation of the spine were found in 118 cases of syringomyelia. Scoliosis most frequent, and the favorite seat is the dorsal region. Irregularity of the pupils in 25 per cent of cases in 118, and it is an early symptom. Mystagmus was found 15 times.

The author takes up the various sensory phenomena and discusses them fully, calling particular attention to dissociation sensibility. Mentions 10 different forms of the disease, pointing out the fact that the gliomatous form occurs early in life, and the myeletic late.

He gives a very clear differential diagnosis between hysteria, leprosy and syringomyelia.

It is the most complete work out on the subject.

S. D. HOPKINS.

WARNER'S POCKET MEDICAL DICTIONARY:—Comprising the pronunciation and definition of 10,000 essential words and terms used in Medicine and Associated Sciences, by Wm. R. Warner, Philadelphia. Pp. 304. 12mo. \$1.00 morocco.

This little desk dictionary is the most recent and probably the best of its kind. It contains all of the new words in relation to skioscopy. The definitions of course are not elaborate but they are sufficient.

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A Scientific Medical Journal, Published in the Interest of the Profession of the Great West.

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Original Communications.

TREATMENT OF UTERINE FIBROIDS.*

By I. B. PERKINS, M. D.,
Denver, Colo.

In the short time which it is my privilege to use for this paper and with a subject on which so much has been written, and on which the opinions of good men differ so widely, it would be impossible for me to cover the entire field. So I have chosen treatment only and shall view hastily a few of the many methods, which have been used and shall try if possible, to come to some conclusion as to the value of these different methods of treatment.

By the term Uterine Fibroids I have meant to include fibroids proper, fibro-myomata and fibro-cystic growths of the uterus; as most writers include these under the one head and as it is next to impossible sometimes to be sure which one of the three exists. In fact it is not uncommon to have a pure fibroid or fibro-myomata in the beginning, degenerate into a cystic or fibro-cystic growth later on in its course. These growths occur more frequently in the body and in the posterior wall of the uterus so it is often quite hard to make a correct diagnosis early; and yet the non-surgical lines of treatment give so much greater promise when applied in the beginning that the necessity for an early diagnosis must be apparent to all. Frequently the only symptom which will cause suspicion of fibroid is a profuse or in some cases a prolonged menstrual flow, and in these cases there is seldom more than three weeks between the menstrual dates. When these symptoms are present it is often easy with bi-manual examination and especially when an anaesthetic is used, to find a thickened, or bulging portion on the wall of the uterus, usually posterior and frequently involving one or the other

*Read before the Colorado State Medical Society, June, 1897.

cornu, or lateral wall of the uterus. I have in several instances, when attending a case of child-birth, or abortion, recognized by these signs what I considered at the time, to be a beginning fibroid and which afterward proved to be such. An early diagnosis having thus been made, much may be done to retard and even to reduce the growth. Any remedy which tends to lessen the blood supply to the uterus will retard tissue formation and thus check the growth.

The administration of ergot has been strongly recommended and extensively used by many of our best men. Some have given it alone while others have combined it with other drugs such as iron and nux vomica, or strychnia. I have felt better satisfied with the results obtained when given with iron and strychnia and I prefer the solids given in a capsule. The reports from this method of treatment show that all we may reasonably expect from it, is an occasional case in which the tumor is held in check, or reduced in size. In these cases, the doses of ergot should be small and should not be continued long at a time lest ergotism be produced.

Electrolysis has had quite an extensive trial but has not yielded the expected results. In a few cases, I have been able to reduce the growth slightly, and in some, have kept it from rapid growth for a time, but some of these same cases have afterward developed more or less rapidly, reaching enormous proportions, and in several instances, cases have come under my observation in which I have reason to fear that the current has caused cystic degeneration and has aided rather than retarded the growth, besides occasionally rendering the case inoperable on account of the adhesions produced. The good to be gotten from galvanism is in the more vascular forms of tumor. Just how this is accomplished is not well understood unless it is that the current lessens the flow of blood to the part. There is no doubt that a disintegrating process takes place, but just what it is and just how it occurs has not been satisfactorily demonstrated as yet. It is safe to say that while much good may be gotten from the galvanic current in properly selected cases, the adherents to Apostoli's method and to the use of strong currents as advised by him, are not nearly so enthusiastic as they were a few years ago. I believe that this method of treatment has its place, but I consider that it is equally as powerful to do harm in some cases, as it is to do good in others. And although we know that hard fibroids bear a strong current better than the other kinds do, yet it is a very difficult matter to determine just which cases will bear it safely. It is my opinion, in view of the harm, which may be produced, that galvanism should, in all cases, where it is used, be used expectantly, and that a current strong enough to cause inflammatory

action with peritoneal adhesions should never be used at all. In the cases where benefit is reported from strong currents, I believe that as good, or better results, would come from a weaker current, continued longer at a time and given at more frequent intervals. In other words, I believe that the good comes more from the proper selection of the case to which the remedy is applicable than to the size of the dose in which it is administered, and when the case is found to be susceptible it is an easy matter to increase the strength of the current. But I would seldom, if ever, apply more than fifty milliamperes.

And when under this or any other line of treatment, a fibroid tumor continues to grow, or begins to grow more rapidly, all other methods of treatment should be abandoned for operative procedure.

Curetting the uterine cavity will often check hemorrhage and help to bring about a shrinkage of the growth and it has the advantage of being applicable in the early stages, and during the application of galvanism and systemic remedies. Ligation of the uterine arteries has the same advantages, and when performed through the vagina by a skillful surgeon, it is scarcely possible for this operation to do any harm. This I consider a far more rational, less dangerous and effective method of lessening the blood supply to the uterus, than the administration of ergot and the application of electricity. The idea of checking, or reducing the growth by lessening the blood supply to it can, in no way, known to us at the present time, be more quickly and successfully produced than by ligating the uterine and the ovarian arteries. In skillful hands, the mortality from opening the abdominal cavity and ligating the ovarian arteries would be next to nothing; and unless it was thought best to hasten the menopause, the ovaries and tubes need not be removed if they are found to be in a normal state. Vaginal hysterectomy I think is of little value in the treatment of uterine fibroids as we are hardly justified in performing so serious an operation at a time when the growth is so small as to admit safely of removal by this method.

If the tumor is large, or is growing rapidly, is degenerating, or if there is suspicion of malignancy the proper thing to do and that which gives the most, if not the only promise, is to open the abdominal cavity, and remove the growth by enucleation, myotomy, or hysterotomy if possible, and if not possible, to remove it by either of these methods, do a complete hysterectomy. The latter operation, although the most radical of all, has been so improved in the past few years, as to render it comparatively safe if

performed when the patient is in fair physical condition, and when few adhesions are present; and with the facility for reaching the pelvic floor given us by Trendelenburg's position, it is possible to remove a nodule from the uterus low down toward the cervix, or even to remove completely and safely the entire uterus though the growth be small.

I wish now to report three cases. One of ligation of the uterine arteries; one a case supposed to have been cured by galvanism and afterward growing to a large size; the other, one of fibroid in the beginning, afterward degenerating into a malignant growth.

About ten years ago, I was called to see Mrs. K., then about 38 years of age, widow, mother of two children. She had a pelvic inflammation, which had confined her to her bed for about a year. Her personal history was about the same as is usual in the early stages of uterine fibroids, and an examination revealed the presence of one in her case. I saw her but once, and this in the absence of her attending physician, who soon afterwards turned her over to a gynecologist for treatment. She was treated systemically and with electricity and was reported cured about a year afterward; the so-called Apostoli's treatment, or some modification of it, having been used. She noticed little or no discomfort for about two years, when the tumor again began to grow and for several years she was treated by different physicians until about two years and a half ago she again fell into my hands. I have since, closely observed her case. I found the tumor filling almost the entire abdominal cavity. Ergot had been used to such an extent that a marked degree of ergotism had been produced. The time for the menopause being near, it was thought best to delay operative procedure until after this change had taken place in the hope that the growth might shrink. There has now been no flowing for nearly a year, the tumor having grown more rapidly since the menopause than it did before until it is so large now that it extends up under the ribs on one side, and can scarcely be tolerated by the patient who has at last consented to have it removed. This, in my opinion, is the course which a great many of the cases reported as cured, by electricity and other methods, are destined to follow.

Case No. 2.—Mrs. S., 40 years of age, American born, is the mother of three children, youngest 6 years of age, oldest 12 years. Has had no miscarriages, and has always recovered quickly from her births except the last one. Menstruation was normal up to that time. Patient has been under my observation for the past eight years and I attended her in her last two confinements. She was normal in all respects so far as I know until her last birth. At that

time hemorrhage was considerable and the uterus did not contract well, and involution was very slow. I discovered at the time of the birth that the uterus was larger on the left side near the fundus, but it was several months before I was positive that I had anything more than sub-involution to deal with, and this was not until a sub-serous nodule developed on the left side of the uterus slightly posterior to the cornu. I then determined that I had a fibroid growth in the wall of the uterus in the posterior and upper part of that organ about the size of a small egg. Several other sub-serous nodules developed later. I followed out in her case the usual medical treatment recommended, together with the application of electricity, though I did not use the current as strong as is recommended by the most enthusiastic advocates of this line of treatment, on account of its causing pain and soreness. For a time the growth remained about the same in size. Soon after this, it began to grow and in spite of the remedies, which I had been using and which I kept up continuously, the tumor grew until it reached nearly to the umbilicus and was full six inches broad. The cervix also was elongated until it protruded from the vulva, though the tumor in the main, rested above the pelvis. Hemorrhages were so profuse, as to cause marked weakness, and the patient failed to fully regain her strength in the interval between periods. I advised hysterectomy but it was declined. I then proposed to ligate the uterine arteries and amputate the cervix, to which the patient consented, and on the 18th of February, 1896, I operated taking off about two inches of the cervix by flap operation and ligated both uterine arteries through incisions which I made on either side of the base of the cervix. Recovery was uneventful and in a few weeks it could easily be seen that the tumor was smaller, and on October 21, 1896, eight months after the operation, the growth had reduced fully half in size and later was still smaller.

I have not seen her for several months past, she having moved to a neighboring town, but I learned from her husband that the growth is getting smaller all the time, that she has no discomfort from it now whatever, and that she flows normally and works hard. And yet, with results so satisfactory as this, I cannot refrain from expressing the belief that it would have been better in this case, as in most cases of the kind, to have done a complete hysterectomy as the condition of the patient at the time, was such, that this operation in all probability could have been safely performed, and as there is considerable danger of degeneration, possibly malignant, taking place, rendering this operation necessary in the future and

possibly, at a time when the patient may not be in so good a condition to withstand it,

Case No. 3.—Bearing on this point, I will report the case of Mrs. M., age 46, married, but was never pregnant. I treated her about four years ago for a slight endometritis, and with this exception which is scarcely worthy of mention she has been entirely well all her life until January or February 1896, when she consulted me complaining of excessive and prolonged menstrual flow. I suggested the possibility of a beginning fibroid growth and requested her to come to my office for examination. I also at the same time, advised a trip to a lower altitude, which she took without consulting me further, going to California. I saw no more of the case until September 1896, when on her return she consulted me again. I found the entire uterus enlarged and hard and on the left side below the fallopian tube there was a small nodule and on the right side apparently involving the cornu and a portion of the fundus was a tumor not larger than a small egg. The patient positively declining any kind of surgical treatment and there being reason to believe that the menopause was near, I began systemic treatment at once, and used a weak galvanic current at first and afterwards a stronger one. Though at no time, stronger than twenty-five milliamperes. She had been treated with electricity and ergot during her stay in California; and I am assured that a mild current only was used there. The growth remained the same, until about ten weeks ago, when it began to grow rapidly. The nodule on the left side developed into a cyst. The one on the right side, developed more rapidly than the other, reaching fully two inches above the umbilicus in about eight weeks filling the entire pelvis and right side of the abdomen. In little more than eight weeks from the time she took her bed, she died of intestinal obstruction and septic peritonitis having had a great deal of pain and considerable fever continually. A post mortem examination showed a cyst on the left side of the uterus, containing more than a pint of blood stained fluid. The one on the right was composed of a degenerated and decaying fibrous mass involving the omentum and the peritoneum, and pressing on the ascending colon and a loop of the ileum in such a way as to produce the intestinal obstruction. The uterus proper was scarcely as large as one's fist but had several small nodules on it in various places, some of which had already begun to break down. In this case the uterus was freely movable at my first examination and if operated very early, might possibly have resulted in a complete cure. Summing up the treatment of uterine fibroids and consider-

ing the statistics on the subject given on both sides, together with my own observation and experience, I am inclined to believe that the greater promise, taking all cases into consideration, is in early operative interference.

A CONTRIBUTION TO THE PATHOLOGY, DIAGNOSIS AND TREATMENT OF GASTRIC DISORDERS.

By E. P. HERSHEY, C. E., M. D.,
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Anthony's Hospital.*

Probably the most prevalent idea as to the etiology of disorders of the gastric mucous membrane, is indiscretion in diet. That this is one of the main factors in a series of causes, no one will gain-say, but that such indiscretions bring about directly any pathological change in this membrane, it is the object of this paper to, at least, cloud with a good deal of uncertainty. Compel an inhabitant of the temperate zone to live upon the greasy diet of a Laplander, or one who has been reared in luxury to subsist upon the rough food of the common laborer, or suddenly change the hardy working-man's diet to one of delicacies, and the result sooner or later will be some disorder in the alimentary canal. On the other hand, we have as one of the most potent factors in the etiology of diseases of the stomach, disturbances occurring in the nervous system, most markedly in prolonged mental labor, associated with anxiety, in which the care and worry are the cause rather than the mental labor. Furthermore, we are assured by clinical facts that any debilitating disease may terminate in some gastric disorder. Carefully gathered statistics fail to bring to light any gastric dyscrasia in which the disease lay primarily in the mucous membrane of the stomach. Let us examine into the statement. Of all the organs of the body, the stomach stands out the most powerful to resist the attacks of disease. Year in and year out it becomes crowded with the most irritating substances, and gets rid of them with the most perfect ease. It is the function of the stomach to mix up and impregnate with the gastric secretion anything that may be put into it, a function practically the same as the mouth save in degree. It is true that overcrowding the stomach may temporarily depress it, but the organ is restored to its normal condition immediately upon getting rid of its contents. Crowd the organ too much, its function becomes unequal to the occasion, and it squeezes into the duodenum

an unhealthy chyle, the first step in the morbid process. The organs of excretion become taxed beyond their power as do the blood-making ones, the blood is charged with deleterious products, the whole nervous system becomes depressed, and we have a complete loss of tone throughout the system, atony everywhere, the herald of all diseases. It is this atony that is the primary lesion found in the gastric mucous membrane, and is known by the time honored expression of Atonic Dyspepsia.

Let us examine into the various affections of the stomach and ascertain, first of all, which of these are directly traceable to neurosis or impaired blood supply. In the first place an acute inflammation (so called) of the gastric mucous membrane can come from but two causes, direct dynamic irritation or congestion such as would befall any mucous surface. Unless this irritation or congestion is continued, the stomach is restored to its normal condition within a short time. Atony on the other hand will either remain atony or else lead to glandular gastritis, or ulceration, these in their turn may be followed by fibroid thickening, sarcoma or carcinoma. No matter what may be the subsequent affection, the primary steps may be found in atony of the mucous membrane. Whether it be the result of charging the blood with improperly prepared food, from the watery blood of the chlorotic, or from the depressed condition of the nervous system and, indeed, all diseases lead to this atonic condition to a greater or less degree. We all know that in every disease the battle cry of every physician, is to look to the mucous surfaces everywhere. The membrane becomes anaemic, all the upper air passages lose their secretions to a certain extent, the mucous membrane of the oesophagus, the stomach, the intestines, all lose their secretions to a greater or less degree, showing the close relationship of mucous surfaces everywhere. It is at such a period that local irritation may play havoc by bringing about inflammation.

That we may the more readily study the different diseases of the stomach, let us examine into the morbid processes that go on in the vault of the pharynx; here we can watch it conveniently and with the least irritation to the patient. If we watch all the changes through which the mucous membrane passes, in this locality, in order to reach the inflammatory stage, we know just what will go on elsewhere, where a mucous surface is involved. In the first place we note a lowering of the vitality of the part; contracted vessels give us pallor, this accompanied by a diminution of the secretion; then follows dilatation of the vessels bringing about redness of the part, accompanied by increased vitiated secretion, so

frequently termed inflammation, but this is not inflammation; just so long as the morbid process ceases at this point we have a trifling affection to deal with; now then, admit the various pathogenic micro-organisms to this vitiated secretion and you have transudation, exudation, probably extravasion, the migration of the leucocytes or so-called phagocytes, which completes the picture of inflammation. The mucous membrane at first in a healthy state is capable of destroying through its secretion all pathogenic micro-organisms, except the powerful ones, such as Neisser's gonococci, but as it passes into the several phases which we have just mentioned, it loses its antiseptic power to a certain degree, until the vitiated secretion occurs, which the micro-organisms find a fertile soil. Although through all these stages the mucous surface secretes in a limited manner, the thick tenacious character of the vitiated secretions, enables the pathogenic micro-organisms to bury themselves within it, thus escaping the antiseptic action of secretion.

In all inflammations from the mouth or the aperture of the nares, to the sigmoid flexure including all its tributaries, the urethra vagina and the bladder, we have identically the same phenomena occurring. Understanding this we need look for nothing but simplicity in the study of diseases of the gastric mucous membrane. We may limit the whole category of affections of the stomach to atony, congestion, gastritis or ulcer, these latter leading possibly to fibroid thickening, sarcoma or carcinoma.

Congestion is but an intermediate stage, between atony and gastritis, so frequently misunderstood and called inflammation. It is unstable in its character constantly interchanging with atony, first, one then the other, first an excess and then a diminution of the secretions, until the final result, either of the restoration of the part to its normal condition, or else to be plunged into a state of chronic inflammation.

It is the object of this paper to state definitely how we should treat diseases of the stomach, and why such treatment should be resorted to. There can be only two methods of treatment, constitutional and local. Just so long as the affection has not gone beyond the stage of atony or at furthest beyond the intermediate stage, that of congestion, we have the best means of curing our patient through constitutional treatment. Just here comes the most important of all methods of treatment, strict diet and hygiene. Indeed, we have every reason to believe that oftentimes this is but a transitory condition, and the very loss of appetite is nature's method of restoring the morbid condition. Should this condition be prolonged and we should suspect that the stomach cannot properly perform its func-

tion, and its secretion is at fault, we must so regulate the food supply, as not to require the normal amount of attention, first by supplying the stomach with such foods as require the least amount of gastric churning, and intermixture with its secretions. Second, if after examining the contents of the stomach after a test meal, we find it lacking in Hcl, this should be supplied. Neither the diet nor the Hcl is meant for local treatment, the object of their administration, is to properly prepare the food for assimilation, thus acting as the most important tonic to the system. By improving the general tone of the body, we bring all the mucous surfaces up to the normal standard.

Conservative specialists who note this early manifestation of atony of the mucous surfaces, look to constitutional disorders from which this condition arises.

Again when atony has become congestion, the preinflammatory stage, our treatment is precisely the same as for atony with the addition of local treatment; constitutional treatment to build up our patient, while we use the local treatment to keep out the pathogenic micro-organisms. Here again, however, treatment calls for the same regime as in the condition of atony. Locally we can have recourse to the stomach tube, using such antiseptic as may prevent the inroad and multiplication of micro-organisms, that find a happy culture medium in the vitiated secretions, adherent upon the surface of the walls, carbolic acid, hydronaphthol and boracic acid being the safest to use. Treating these cases simply by lavage, is productive of little good.

One point to be brought out in this paper, is the utter uselessness of treating glandular gastritis medicinally and without local applications. Should statistics be presented showing successful results without local treatment, the diagnosis must be questioned. Simple atony will oft times give all the distressing symptoms of a well marked case of gastritis, and so, too, will congestion. Should the diagnosis of glandular gastritis, be reached, from the symptoms presented it should be confirmed by a bacteriological investigation, by the use of the gyromele used by Turck*, of Chicago, a most excellent and handy little instrument. By this means the unhealthy membranes may be swept from the walls of the stomach, washed out and examined. You may find evidences of inflammation microscopically, but not until you have examined a strip of this mucous microscopically can you be certain that you have a typical case of gastritis, then you note that it is teeming with bacteria, and when you see how aptly these micro-organisms have imbedded themselves

* *Chicago Clinical Review*, February 1896.

within this detritus you will understand why the free Hcl has not destroyed them. Leucocytes are seen to be plentiful, and the altered structure of the gland cells occasionally found, in itself is sufficient to be pathognomonic of the disease.

The picture is a graphic one; a large surface of mucous membrane, the glands thickened, enlarged, and denuded of their epithelium, here and there large areas covered with a thick, glary, often plastic exudation, alive with streptococci of all grades, indeed all the pathogenic micro-organisms finding here a fertile soil. When the free Hcl of the stomach cannot reach these organisms to destroy them, what results may we expect to find after the use of the so-called stomachics? To get at this affection we must do precisely the same thing as they do in all inflammatory affections of the mucous membranes everywhere. In chronic rhinitis, pharyngitis or laryngitis, the laryngologist will bear us out in the statement, that the first step is to keep the mucous surface clean. The gynaecologist when he diagnoses chronic endometritis, does not treat the disorder alone by constitutional medication, but he first emphatically recommends the surface to be curetted and kept clean. Why not curette the walls of the stomach? This has been done, is done, Turck's gyro-mele does it, and his nebulizer* does all that the laryngologist can do to the upper air passages, or the gynecologist to the endometrium; they keep them clean. If in conjunction to this cleanliness, the general system be kept well toned up, the healthy blood supply to the part will restore the part as nearly to the normal condition, as the products of the inflammatory process will permit.

The only result we can expect in the treatment of chronic glandular gastritis is the arrest of inflammatory process and the prevention of its return. Once having a well marked case of gastritis, means a continued abnormal condition of the mucous membrane. Cicatricial connective tissue must follow in the wake of inflammation, and thus we find that though our patient is apparently cured, he is subject to future attacks. The newly formed tissue mars the regularity of the once healthy membrane, cicatricial contractions occur to a greater or less degree, impairing the function as to its motility, according to the amount of tissue involved.

In congestion of the gastric mucous membrane, we meet with the same vitiated secretion as is met with in similar conditions of any mucous surface. This secretion in itself threatens evil as long as it exists, the greatest source of evil lying in disorders of the nose and throat, where colonies of micro-organisms exist, and these are readily carried into the stomach by the food. Where any inflam-

* *Vide. American Medico-Surgical Bulletin, July 1, 1895.*

matory condition exists in the upper air passages, the most valuable suggestion that could be made, is to keep these clean. Few nose and throat specialists will refuse to bear us out on this point, as in early cases of inflammation of the gastric mucous membrane, the process has stopped immediately upon proper treatment of the nares or pharynx. Even in this condition of hyperaemia it will be necessary to carry out the same treatment at times as we shall now suggest in

THE TREATMENT OF CHRONIC GLANDULAR GASTRITIS.

This is essentially local, the constitutional treatment being used only for the purpose of toning up the general system, while we are endeavoring to stay the destructive process. The diet is practically the same as above set forth in atony.

By means of the gyromele we brush off all the vitiated secretions, and immediately wash them out of the stomach. If necessary, as suggested by Turck* using *Tr. saponis viridis* 3j to *Aqua Oj.* This may be passed through the gyromele while it is revolving. After the stomach has been thoroughly cleansed, the stomach is sprayed through a double tube by means of a nebulizer, using for the spray the following formula:

Oil of Cinnamon.....	2 parts.
Oil of Cloves.....	2 "
Menthol.....	1 part.
Olive Oil.....	10 parts.

By this means the finely divided essential oils are made to reach every portion of the mucous surface. It is astonishing the results obtained by this means of medication, the worst pains of gastralgia and gastrodynia are relieved by it more quickly, and the result more lasting, than the use of opiates in any form.

Although it would be impossible to explain thoroughly the technique of the local treatment of diseases of the stomach, yet a few precautions may here be given, that those who may follow out the treatment may do little or no injury.

In withdrawing the contents of the stomach after a test meal, a vacuum is produced in the exhaust bottle which is seldom entirely replaced by the material extracted from the stomach. Often after the same fluid ceases to flow the mucous membrane is drawn into the tube, the tube holding fast. This resistance can be felt when attempting to remove the tube. If force be applied the result may be the tearing of the mucous membrane followed by hemorrhage. This evil may be obviated by simply removing the cork before withdrawing the tube.

In the use of the double tube, it will be noticed that the larger

* *Chicago Clinical Review*, February 1877.

tube reaches considerably lower than the one through which the spray is passed. It is preferable to use the shorter tube for the spray as passing it through the lower one it does not effectively reach every portion of the mucous surface. The lower end may be immersed in fluid preventing the escape of the air thus making it liable to produce dilation from forcing in the spray.

Another point to be particularly emphasized in washing out the stomach is not to use too much water at any one time. A case now under treatment for dilatation was advised to use at least a gallon at a time, and regardless of the distressing symptoms produced, he did so, gradually increasing the amount to two gallons. No doubt had he continued this treatment much longer, he could have used a quarter of a barrel; as it is, he will carry a part of this dilatation with him to the grave. From a pint to a pint and a half should be used and no more.

SUMMARY.

We must look to constitutional directions for the etiology of gastric affections. That whereas diet has little to do with local irritation of the gastric mucous membrane, proper kinds of food should be ordered those suffering from diseases of the stomach, that the system may be properly nourished. When we speak of hygienic regime we mean fresh air and proper exercise combined with the diet prescribed.

By an inflammation we mean a distinct affection characterized by destruction of tissue, and finally, dividing diseases of the stomach into constitutional and local, we must recognize the two forms of treatment, the one to purify the blood and tone up the system; the other to destroy the pathogenic micro-organisms that we recognize as the sole cause of inflammation.

FRACTURE OF THE ULNA FOLLOWED BY EXTENSIVE SUPPURATION, WITH ESPECIAL REFERENCE TO THE TREATMENT OF THE SUPPURATION. REPORT OF A CASE.

ALFRED C. GODFREY, M. D.,
Denver, Colo.

Demonstrator of Anatomy Medical Department Denver University.

One reason I have for reporting the following case is because of the view held by railroad officials, the people in general and by some practitioners of medicine, that a satisfactory termination of this class of injury can be brought about only in a hospital.

Mr. B., a conductor on the Illinois Central Railroad while

coupling cars was a little slow in drawing out his arm and got it pinched. The tissues were very severely lacerated and the ulna fractured about two inches below the olecranon process. The wound was dressed and sewed up tightly without any drainage. The fracture was reduced and the arm placed in a semi-prone right angled position. Five days later I saw him at his home in Galena, Ill. These were the symptoms I found. Intense pain in the arm, oedema, a florid redness spreading over it from the tips of the fingers to half way up the humerus. His temperature was 104° Fahr., sleepless, bowels constipated, tongue furred and thick, breath bad, skin yellowish, face pinched, extremely nervous, anorexia, and pulse 103.

Being informed of the nature of the injury it was feared that the joint was involved. So great was the swelling that the motion of the joint was restricted and no motion of the fragments at the seat of fracture could be obtained. What had occurred? At the time of injury the tissues were gaping. Although thorough irrigation of the parts was practiced and the surgeon had sufficiently satisfied himself of the aseptic condition of the parts as to induce him to close it without drainage, the pyogenic microbes had gained entrance and secreted themselves in some portion of the wound inaccessible to the irrigating fluid and finding a suitable soil in the bruised tissue for their flourishing development had increased in number and disseminated through the lymphatics and intermuscular septa. Regional dissemination had occurred. Already a general ptomainaemia was produced as was evidenced by the rise of temperature and its adjuvant symptoms. Later delirium supervened.

By deep palpation fluctuation was elicited and there was but one course to pursue, viz: That of thorough drainage. No half way measures in a case of this kind could here ward off a disastrous result to limb and possibly to life.

Several incisions were made and thorough drainage instituted by the Hiltod-Roser method. This method consists of making an incision through the skin and working the way to a counter opening by means of a long pair of blunt forceps. In this way important vessels and nerves are passed in safety. The forceps being pressed up under the skin at the site of counter opening an incision is made down upon them. By spreading the blades of the forceps and withdrawing them open the tract is dilated so as to prevent pressure on whatever material is used for drainage. The forceps are once more passed through and the tube or gauze is seized and pulled into position by again withdrawing the forceps. Thorough

irrigation with a solution of 1 to 3000 bichloride of mercury was instituted and the limb wrapped in antiseptic gauze which was kept constantly moistened with a hot saturated solution of boric acid. Twice daily the dressings were changed and the wound thoroughly irrigated with bichloride solution. Sloughs of enormous size were discharged from time to time, and on the twelfth day after the reception of the injury a piece of bone one inch in length presented at one of the openings. This was removed and the swelling gradually subsided. All improved and the arm looked well after a few weeks, but there still remained a sinus which discharged pus. On exploration of this, necrotic bone was found at the bottom. The patient was etherized and a large piece of the ulna chiseled away. After this the wound healed kindly and the arm when I last saw it was in the following condition: Extension perfect, flexion slightly impaired, pronation and supination perfect, the little and ring fingers incapable of complete extension, numbness of the little and one-half the ring finger. Grip fairly good.

This case illustrates the dangers of sewing up wounds received about cars or machinery. They are not only generally crushing injuries, (and this fact alone makes it almost impossible to tell the exact amount of injury the tissues have suffered) but they should be regarded as infected wounds and thorough drainage always employed.

**A CASE OF PULMONARY TUBERCULOSIS—WITH TUBERCULAR
PLURISY—EFFUSION ON LEFT SIDE—ASPIRATION-PNEU-
MOTHORAX—OCCURRING IN THE PRACTICE OF
DR. S. A. FISK.**

Reported by DR. C. D. NELSON,
Greeley, Colo.

Ada K., aged 22, single, a milliner by occupation, was born in Germany. At the age of 14 she came to America, living for the ensuing eight years in Chicago. Her family history and previous personal history were good. She says that up to June 1893 she had never had any illness of any sort. Her work for the previous five years had been hard, her hours being from 8 a. m., to 10 p. m., with an hour for lunch. Her present illness beginning in June last was called "bronchitis." In the November following she was sent to Colorado. She did well up to December 18, when she got a bad cold and went to bed. About January 1, 1894, she came under the

care of Dr. S. A. Fisk. He made a diagnosis of pulmonary tuberculosis and left sided pleurisy with effusion.

An exploratory aspiration by Dr. Arthur Fisk showed the presence of fluid. My examination of the sputum confirmed the diagnosis of the tuberculosis as there were numerous bacilli.

The fluid drawn off was given to me for microscopic examination. It was but slightly turbid and of a greenish yellow color. I reported that the microscope showed almost nothing, but a few leucocytes and a few bits of fibrin. Dr. Fisk then decided to aspirate the fluid. About a half liter was drawn off. A portion of this fluid was given to me. There was somewhat more sediment to this, as if perhaps the fluid first drawn off had come from the upper part of that in the pleural cavity. I found the same things as at first only somewhat more numerous and also tubercle bacilli. These had been sought without avail in the fluid first drawn off. There were, say, one or two bacilli to the square m. m. on the slide. As time went on Miss K., grew more seriously ill and on March 25, she entered Dr. Fisk's ward at St. Luke's Hospital. He saw her about two hours before her removal to the hospital when the lower part of the left side of the chest was flat. Soon after her entrance when I first saw her the lower half of the left front was markedly tympanic. This tympany extended down to about the posterior axillary line as she lay on her back.

No attempt was made to turn the patient to see the effect on the tympany as she was too weak. There was some tympany over the region of the stomach but this was not marked. In reply to a question the patient said she had felt a little pain in her chest during her removal to the hospital but only a little. Evidently the situation was one of both air, and fluid in the pleural cavity the rent in the lung that let the air in, not having caused much pain. I examined the urine soon after her entrance. The nurse could only get a little, not enough to take the specific gravity. The record reads: *Color*, normal. *Reaction*, slightly acid. *Albumen*, $\frac{1}{4}$ %. (This was simply an estimate.) *Sugar*, absent. *Sediment*, pus, free and in clumps, few vaginal cells, short hyaline and fine granular casts, some of especially large diameter. An examination the next day showed essentially the same things present. The specific gravity was 1028 and one epithelial cast was found beside what was found the day before. After her entrance to the hospital Dr. Rogers saw the case in consultation and the question of resection of one or more ribs was gone over as the lung had not expanded well after the aspiration. It was thought best to aspirate again. This was done March 30. About the same amount of fluid was drawn off as

the first time. A portion of this fluid was submitted to Dr. LeGarde, U. S. A. He inoculated two tubes of agar, two of gelatin and two of bouillon and got no growth of anything. He reported that in his opinion it was a pure tubercular fluid. I found tubercle bacilli in this fluid also, about as many as before. Miss K., bore the operation very well and lingered along till April 11, when she died. No autopsy could be obtained.

It may be noted that the bacilli were sought in the sediment which collected at the bottom of the fluid and the fluid stood several days before any sediment was taken up.

DR. STOVER'S BALTIMORE LETTER.

We are sure that the following letter written while Dr. Stover was still in attendance at post graduate work in Baltimore, will lose none of its interest, because its appearance in Denver is prefaced by that of himself.

BALTIMORE, MD., June 30, 1897.

Dr. Welch is now lecturing upon "Immunity," from the bacteriological standpoint. He gives four forms of immunization; by bacteria, by bacterial products, by immune blood serum, by other substances capable of causing leucocytosis. A curious feature of the subject is that an animal may be rendered insusceptible to bacteria and not to their toxins, or insusceptible to the toxins and not to the bacteria. In certain mixtures of toxin and antitoxin which do not harm test animals, it has been possible to separate the two elements; if the antitoxin is removed, the remainder has antitoxic power, thus proving that these mixtures of toxin and antitoxin are the seat of chemical action between the elements, but that the antagonistic action takes place in the body of the inoculated animal.

The case of lepra now in the hospital will be given a course of treatment with erysipelas toxin.

The Brand treatment of typhoid is used here entirely. There are not many cases now on hand so I cannot give a mature judgment as to its efficacy. At present I decidedly do not favor it. The Widal serum test is made, and the Diazo reaction looked for in all cases of typhoid or suspected cases.

Many cases of malaria are appearing and in each one the blood is examined for the malarial organisms. I have seen enough to convince me that each form of malaria has its specific micro-organism or parasite.

Dr. Osler comments upon the frequency with which persons who have once had pleurisy, afterward develop tuberculosis.

There are a number of cases of osteo-arthritis pulmonum

in the tuberculous ward. I wonder why, with the large number of tuberculous individuals we have in Colorado, this condition is not more frequently met with. There is also here a fine case of acromegaly, and it is interesting to compare it with the pulmonary arthropathic cases. In acromegaly the bones of the face are much enlarged, while in the arthropathy the change is chiefly confined to the bones of the extremities.

Diuretin is found useful in the renal complications of heart disease.

In arterio-sclerosis with high blood pressure, bleeding is an efficient resource. It is sometimes useful in mitral stenosis.

In a recent case of inflammation of the parotid, the mouth temperature was 112 degrees; in the rectum the thermometer registered 100.5 degrees. I did not learn if subsequent trials evidenced cheating on the part of the patient. Some individuals have a trick of biting the bulb of the thermometer, and in this way sending the mercury up.

Inflation of the stomach by carbon dioxide is much used in suitable cases. The patient first drinks a solution of sodium bicarbonate, then a solution of citric acid. This renders the stomach outlines fairly visible.

Amoebic dysentery is frequently seen in the wards. The disease seems to exist as far north as Virginia, though really its habitat is in tropical countries.

Dr. Osler says that aortic stenosis is present in only one per cent of cases in which a systolic murmur is heard in the aortic region. The diastolic murmur of aortic insufficiency is usually heard at the left side of the sternum. He gives as symptoms of myocarditis, which is the frequent cause of sudden deaths, age over 40, swelling of feet, praecordial pain, cardiac asthma, small, irregular pulse.

Dr. Barker is giving an interesting series of lectures on the nervous system, which are being published in the New York Medical Journal; they will later appear in book form, and will be a valuable addition to neurological literature. In connection with neurology, it pleases me to note that Dr. Eskridge is regularly quoted in the clinical lectures here.

The clinical laboratory work is now upon the blood, which is being considered very thoroughly.

Dr. Osler emphasizes the importance of examining the auricular appendages for tophi in cases of chronic arthritis.

Dr. Thayer in a recent interesting clinical talk upon malarial haemoglobinuria, spoke of four types, as follows:

1. The attack appears during a paroxysm when the parasites are segmenting; the urine contains large amounts of haemoglobin. This process is gone through at each paroxysm. Quinine is curative.

2. A single very severe attack, at time of segmentation of parasites; death frequently occurs. If the attack is not fatal, there are no more, and the parasites disappear from the blood, probably having been killed by the amount and virulence of their own toxins. Quinine does no harm, and no good.

3. Occurring a week or so after recovery from a malarial attack. Considerable haemoglobin in the urine, no parasites in the blood. Quinine is of no value.

4. In certain regions, Sicily, Africa, and some of our southern states, the administration of quinine to individuals who have had or are having malaria will cause a sharp attack of haemoglobinuria; no parasites found in the blood. This type is very rare.

It may be given as a general rule in cases of haemoglobinuria, when there is no history of attacks due to quinine, and in the absence of a microscopical examination of the blood, that quinine should be given. Of course, if the microscope shows that parasites are absent, quinine is of no use.

Prof. Welch says of Serotherapy: "We now have absolutely positive proof of the practical use of the treatment in human diseases;" the success of the treatment by anti-diphtheritic serum has been conclusively shown from an experimental basis, and demonstrated by statistical evidence. Unpleasant effects of serum treatment were due to the serum as serum, and the quantity used. The serum of the normal horse will produce the same unpleasant effects. The use of the concentrated serums now obtainable will obviate these. There has been no adequate explanation of the death of Prof. Langerhan's son, Prof. Escherlich claims that the child was of the "lymphatic diathesis;" such children have been known to die suddenly from slight excitement, even from ordinary hypodermic injections.

The tetanus antitoxin has not such a strong experimental basis as that of diphtheria; and there is not yet satisfactory evidence of its clinical value, and the same must be said of the anti-streptococcus serum.

Since returning from Philadelphia, I have heard many expressions of pleasure at the selection of Denver for the next meeting of the American Medical Association. I do not believe we need to fear a small meeting.

**DR. SEEBASS' LETTER TO THE JOURNAL FROM LEIPSIK,
GERMANY.**

Our foreign letter from Dr. Seebass was crowded out last month, but the news it contains is not of the stale-growing kind, and the description of post-graduate and clinic work in Germany will still be of the same interest at this date.

"The University of Leipsic, its medical and philosophical departments in particular are well equipped and well attended. The gynaecological and children's hospitals of the medical department occupy large buildings, well adapted for the purposes. I attended the clinics and polyclinics from 7 a. m., until 6 p. m. In medicine proper, Prof. Dr. Curschman and Hofman have well attended polyclinics, the patients submitting to long continued exposure and oft-times pain to have these eminent men give their opinion and subsequent treatment.

"Prof. Dr. Friedrich has a clinic so well attended that 'standing room only' is always in demand. He is a quick operator, which is the exception among those I saw at their work.

"Prof. Dr. Zweifel of the gynaecological department is a good teacher and much to my surprise spoke well of Hodges' and Thomas' pessaries in retroflexions and versions, also saying that if these two particular shapes did not do the work it was not worth while trying the many late German supporters, but to proceed to surgical work.

"The German teachers usually do not say more than they have to about America's or other foreign countries' contrivances or ideas and rather elaborate on some of their own countrymen's new theoretical or practical views or apparatus.

"I saw the Murphy button used several times but no mention was made of its invention in the clinics.

"Prof. Dr. Soltman, of the children's hospital, and lecturer on children's diseases, knows well how to handle the German mothers who bring their children to him, by nice little sayings and confidential remarks, much to the amusement of the students. He gave some good lectures on rachitis and osteo-malacia. He does not believe in splints and other mechanical contrivances used so extensively by many others, in bad cases, but looks to hygienic and dietetic means as the best therapeutic remedies for the many different forms of this disease.

"Dr. Hoffman, professor of hygiene has done much for the health of the city of Leipsic, and as sanitary advisor to the city he proposed a law to the city council, which was passed, prohibiting anything higher than a three story building to be erected inside the heart of the city.

"At the clinics in Heidelberg, foreigners are plentiful, especially English and Americans. Dr. Czerny, professor of surgery, operates from 8:30 to 12:30 every day, being supplied with ample material for operation which collects from far and near, and one can see from six to ten operations each morning.

"Dr. Vierardt is well liked by the students but not so well by the patients, because he allows the students ample time and opportunity for personal examination.

"My choice of all the departments at Heidleberg was that of pathological anatomy in charge of Prof. Dr. Arnold. Each lecture is well demonstrated by the never-ending variety of pathological specimens which are passed around for personal inspection by the students. After the lecture, which is from 3 to 4 o'clock every afternoon, the students go to a dissecting room below where all the abdominal and thoracic organs of from three to eight different cadavers are demonstrated macroscopically and later on, in addition to this, a clinical lecture is given on the microscopic appearance of the various pathological conditions, when the student must also mount his own sections and examine them carefully. Where all this material comes from I have often wondered. Tuberculosis plays an important role in the death rate all over Germany, and many of the specimens are tubercular.

"The students here do not seem to work as hard as those in America. Fifty per cent of them wear glasses and have numerous cuts in their faces,—'the sign of bravery'—and the scars left do not speak for strict aseptic surgery.

"Were I to give an opinion as to the best place to study medicine, (which is only based on a short stay and limited travel here) I would say that I, for my part, am satisfied with the instruction given in the eastern colleges of our country, where one can see everything in the line of surgery and medicine and I frankly confess that at this present moment I can not say that Germany is far ahead of us in knowledge of, and practical work in medicine. My stay here was a pleasant one and I am glad I have seen several of the German universities and eminent professors; I was treated courteously by the clinicians in charge as well as by the students in every case."

The following is an extract from a private letter recently received from Dr. R. B. Knight, formerly of Denver but who is now located at White Hills, Arizona, where, besides receiving a good salary as physician for a large mining company, and holding the

office of County Physician, he has surrounded himself with a private practice which, all taken together are making a busy life for him.

As this letter comes as a sort of brief review of the medical status of our neighbor state we are sure it will be of interest to our readers. One thing we know, if Dr. Knight's letter could be given a hearing before some of our medical societies it would not pass without discussion, for if there is one subject upon medical lore which never lacks for discussion it is the one of "fever with some of the symptoms of typhoid."

"We have quite a lively little town here and many interesting cases are coming up all the time. Pneumonia is quite prevalent in the winter and early summer. Just at present we are having an epidemic of fever typhoidal in character but without some of the typhoid symptoms. Thus far we have been fortunate enough to escape without any deaths. Pneumonia is much more to be dreaded, very few cases resulting favorably. Everything goes along nicely until the stage of resolution should begin when instead, it goes on to purulent infiltration, complicated with pericarditis, toxæmia and death. The usual time between the beginning and ending of a case is fifteen days. I have tried all the usual remedies advised in such cases but cannot get results.

"Our elevation is about 3000 feet, with no moisture, the atmosphere being dry and clear. Southwest trade winds exist between May and July. In consequence of the rapid evaporation and insensible perspiration urine as examined shows a specific gravity of about 1030. I have recently made thirty or more examinations for life insurance and in no case where the urine was voided after 10 a. m., was the specific gravity lower than 1025. Much irritation must result to the kidneys yet I have not met with any acute or chronic cases of inflammation of the kidney."

News Items.

Dr. Pfeiffer has returned from his eastern trip, refreshed and vigorous.

Dr. S. A. Fisk was prospecting in Lake County last week. He was on his annual visit to the Golden Fleece mine.

Walter Russell Freeman is the new name of the new baby at the home of Dr. and Mrs. R. B. Freeman in North Denver.

Dr. Charles Powers was recently elected to fill the vacancy on the staff of St. Luke's Hospital, caused by the death of Dr. Hugo Mager.

Dr. Vivian Pennock, of Silver Plume, Colo., was in Denver for a short stay, during August.

Dr. Eskridge is hunting rest and recreation, *but no bears*, at Wagon Wheel Gap, for a few days.

Dr. Henry Sewall took his summer outing at Cassell's where nature offers great enticement to a hard-worked doctor.

There are no roads too rough for Dr. Spivak to ride his bicycle over since he paid \$1.50 and costs to the police court for riding on the sidewalks!

Dr. W. W. Bulette, of Pueblo, remained in Philadelphia after the American Medical Association, taking post-graduate work. He is expected home this month.

Senator Teller has presented to the Senate the petitions of the Colorado State Medical Society and the Cripple Creek Medical Society against the passage of the senate vivisection bill.

The Mississippi Valley Medical Association will meet at Louisville, October 5, 6, 7, 8, 1897, and much interest is being taken by the committee of arrangements to make the meeting an unprecedented success.

The State Medical School has another law suit on its hands. This time it is a member of last year's senior class, Mr. McDonald, who brings suit to obtain a diploma which he alleges they have unlawfully withheld from him.

The newly reorganized faculty and teaching force of the University of Denver Medical College tightened their bond of good fellowship by a moonlight ride and a dinner at Littleton lately, taking advantage of a July full moon.

In the list of delegates that President Lemen of the State Medical Society was to appoint, one was omitted, namely the Committee to collect and study the medicinal herbs of Colorado. Dr. C. D. Spivak has been made the Chairman of this Committee.

The Pueblo County Medical Society and the board of county commissioners are at war with each other over post mortem fees. The Medical Society declares \$50 to be the proper fee for holding an autopsy while the commissioners think \$25 is sufficient.

Dr. Rivers says he is going to the British Medical Association in Canada; one of his friends says he is going on a hunting trip to the mountains while rumor has it that a matrimonial bee is buzzing around his head. These are queer times we are living in and one hardly knows what to expect.

The Lake County Medical Association at a recent meeting

elected, for its officers for the ensuing year, Dr. Lee Kahn, President; Dr. J. H. Cole, Vice-President; Dr. Heimberger, Secretary and Treasurer. With such an efficient list of officers, we expect to hear of its good work, through the columns of the JOURNAL.

Dr. James Muir and wife, Dr. Hannah Taylor Muir, have returned from a protracted absence from Colorado and are now permanently located in Colorado Springs. While they were away they traveled through Europe and availed themselves of post-graduate and clinical opportunities in the famous institutions of learning in the Old Country and visited for some time in and around Philadelphia.

During this hot weather it is the right thing to do to drink distilled water. Our advertising pages tell you where to get it and all about its cost. Every month we try to present to you in our advertisements just such information as will be of service to you. We take a great interest in our advertising pages. It pays us of course. Our best typographical work is displayed there. Our printer has gotten up a number of new and attractive designs this month that we call your attention to.

A new college with hospital connected, is to be erected by the first of the year by the Denver Homeopathic Medical College and Hospital Association. The board of directors of the new college and hospital is composed of B. A. Wheeler, M. D., president; J. Wylie Anderson, M. D., secretary; W. A. Burr, A. M., M. D., treasurer; S. S. Smythe, M. D., C. E. Tennant, Sr., M. D., J. Warner Mills, LL. D., J. H. Morrow, M. D., D. A. Strickler, M. D., E. H. King, M. D., C. E. Tennant, Jr., M. D., J. C. Irvine, M. D., S. S. Kehr, M. D., J. P. Willard, M. D., E. F. A. Drake, M. D.

The Health Department, and Dr. Mitchell in particular, deserve much commendation for the circular they have issued to physicians, along with a glass slide which is for preserving drops of blood to be sent to the department for the serum test of typhoid fever. The attending physician fills out the blank, and the temperature chart, and this with the blood, are used by the bacteriologist at the Health Department in diagnosing typhoid fever. It will be of unquestionable benefit as the typhoid season approaches, and as the disease is already assuming a serious form of epidemic, it is to be hoped this step on the part of the Health Department will do much to allay its inroads.

The Rocky Mountain Interstate Medical Society was formed at Salt Lake City July 24. It is composed of members from Colorado, Arizona, Utah, Montana, Idaho and Wyoming. By-laws were

adopted and the following officers chosen: C. P. Hough, M. D., Salt Lake, president; C. K. Cole, M. D., Helena, vice-president; Clayton Parkhill, M. D., Denver, second vice-president; E. Stuver, M. D., Rawlins, Wyo., secretary and treasurer; Drs. Chappell, of Billings, A. S. Bower of Salt Lake and C. K. Fleming of Denver, membership committee. The meeting for 1898 will be held in Denver at the time of the American Medical Association. The list for charter membership will be open until that meeting.

The bacteriological examination of Denver's drinking water during the month of July showed a very bad condition indeed. The number of colonies per cubic centimeter ranged from 200 to 857. The standards for filtered water are, below 100 colonies per cubic centimeter, good; between 100 and 200, suspicious but usable, above 200, bad. Dr. Munn is filing away some important data in this examination. It is unfortunate that the Water Company persists in its stand against the interests of our population. One can hardly refrain from wishing that a few of the large stockholders might have to drink some of this water and have a little typhoid.

The Peoria Medical Journal tells us that Dr. A. G. Lewis, Mayor of Manitou, Colorado, has created somewhat of a sensation by recently laying claim to 160 acres, covering and including the top of Pike's Peak, for the disposition of which he has recently made application to the United States authorities.

The Buffalo Medical Journal says in regard to the place of meeting of the American Medical Association:

"Denver which secures the meeting next year, will find it difficult to follow Philadelphia in entertaining the association, and a year from now may be a wiser if not a better city."

The Western Medical Review speaks as follows, on this subject:

"General satisfaction was evident among the members of the association, as they expect an enjoyable time in Denver. It is to be hoped that the physicians of the west will aid the profession of Denver and Colorado in making the meeting a successful one in point of numbers at least. Denver will attend to making it successful otherwise."

From Langsdale Lancet:

"Nearly everyone wanted to go to Denver next year so Denver was selected as the next meeting place."

The Medical and Surgical Reporter recommends that every society, and especially the American Medical Association, have an editorial committee which should reject, curtail or abstract every paper not of suitable length and interest, with the same impartiality as if it were presented for publication.

How the Ladies Were Entertained at the American Medical Association in Philadelphia.

To a "Westerner" who anticipated the stiff formality which pervades the bulk of Philadelphians (and for which they are irresponsible, since it has come to them as a heritage) their ardent endeavor to be hospitable and "free," seemed to deserve appreciation. The crowd were there to be entertained and with a thousand or so doctor's wives, making up the number, there was no time for the hostesses to stop and ask, "Who was your grandmother?" But the ladies were by no means neglected in the way of entertainment, and while the husbands were engaged in hair-splitting arguments over whether leucocytes of the blood pointed up or down, in diagnosing tuberculosis, or whether diaphragmatic paresis can be more positively diagnosed after the patient *respires* or *expires*, we were being shown the sights of Philadelphia and environments. Invitations to the various entertainments were received by card at the same time the doctors received theirs at the postoffice window in the registration building. Some of the invitations were worded so as not to be misconstrued as to whether the husband was included, while others were very indefinite as to that. The same way with the gentlemen's invitations. On a trip up the Delaware River to the Children's Summer Sanitarium one lone man got mixed up in the crowd of ladies, whether intentionally or otherwise I know not. He looked sickly—but that may have been caused by the surroundings he was placed in.

The ladies had one convenient and common meeting place—The New Century Club, where all excursions and parties started from. Here each lady registered and was given a complimentary souvenir book containing each day's social program and a list of places where one might want to visit, with explicit directions how to reach them.

On the afternoon of the first day (Tuesday) cars were provided for the ladies to take them to Fairmount Park, considered to be the largest park in the world. A trolley line runs around the entire distance of the park on the outskirts and by this means the ladies were given an idea of its immensity, but like Moses of old, were allowed only "to look over into the Promised Land."

Light refreshments were served at the Belmont Mansion before returning to the city. In the evening, while the gentlemen were enjoying themselves at the various section dinners the ladies were invited to a reception given by the Mayor at the City Hall, but official business or some other urgent matter necessitated the Mayor

to excuse himself for two hours and the ladies experienced the vacuity of "Shakespeare without a Hamlet." The magnificence of the building and the coolness of the evening made up for the lack of a host, and refreshments.

Wednesday was the "banner day" all around. No threatening rain caused doubts as to "what to wear" and the entertainment was varied and novel.

In the morning we had our choice between a steamer-ride on the Delaware River to the Summer Sanitarium and listening to President McKinley's address. I mention the ride on the Delaware River first, before President McKinley, because it was so surpassingly more attractive to me, and I lost no time in making my choice. A special steamer with Mr. and Mrs. Monroe Smith on board as host and hostess, awaited the crowd at the wharf and puffed up the River with us, entirely too quickly to suit me.

I am sorry some of the ladies interested in the Babies' Summer Hospital in Denver could not have had my place when it came to visiting the institution, for I have never been able to command much enthusiasm over hospitals. The guests were shown over the house and immense grounds, the baths, swimming pool, play grounds, etc., and treated to a delightful and well served luncheon under the trees on the grounds.

On our return trip, Cramp's Ship Yards were visited but such a place is so much of a novelty to one who has confined her knowledge of ships to the column in the daily paper headed "steamship arrivals," that I pass this place by as unequal to the task. The trip was a pronounced success. We had just enough time on our return to refresh our toilet and then find our way to the Belmont Cricket Club, where a reception was given the ladies. Wives of a number of the doctors we had previously met, were there receiving and with such charming hostesses, lovely surroundings and dainty refreshments, we were loth to leave. But Philadelphia is a city of magnificent distances and we had four receptions on the evening's program. Wednesday evening's receptions included both ladies and gentlemen and were given by Dr. and Mrs. Shoemaker in honor of Governor and Mrs. Hastings; The Department of Medicine of the University of Pennsylvania at the Union League Club; The Woman's Medical College of Pennsylvania at the College, and the Jefferson Medical College at the Pennsylvania Academy of Fine Arts. The visit to the latter reminded one of the Art Building at the World's Fair, on a small scale, and one whole day would have been too short a time to devote to it.

Thursday morning we availed ourselves of one of the daily tallyho drives to Mulford's Antitoxin Farm, and saw and learned

much of the scientific world, especially that of comparatively recent investigation. The horses were such healthy, noble looking brutes that one could hardly conceive of their being made such a tool for man's ingenuity. The afternoon was left us for our own amusement and after wandering through the maze and labyrinth of Wanamaker's store, we went to the hotel to rest up for the evening's entertainment, which was a theatre party at the Broad Street Theatre, given by Lea Brothers & Co.

Friday afternoon we joined the throng on the trip to Atlantic City where the delightful entertainment provided for us there, was such a fitting ending to a happy season of enjoyment.

When the association meets in Denver in 1898 the entertainment of the visiting ladies will probably fall largely upon the ladies of Denver, and I feel no hesitancy in saying that it will play no "second fiddle" to the Philadelphia entertainment. While I realize that Philadelphia has some advantages over us that an old, established city always holds over a new one, still hospitality counts for a great deal, and a goodly portion of that given out with our attractions in the way of climate (of course), rugged mountain scenery, and the surprises that Denver always affords strangers on account of its beautiful streets, homes and substantial business houses, will give them such pleasant memories that historic grounds and even the Old Ocean itself will be put aside as "mediocre," compared with what we have given them.

MRS. E. R. AXTELL.

The Death of Dr. Mager.

The necrology list of the medical fraternity of Colorado has been added to, the past month by the death of Dr. Hugo Mager, whose high esteem was attested to by the many public demonstrations offered in his behalf by his professional brethren and other friends. The sad accident, followed by his death has been recounted in the daily press. Special meetings were held by the Denver and Arapahoe Medical Societies and the Denver Clinical and Pathological Societies, both of which he was a member, to pass suitable resolutions upon his untimely demise and to request the members to attend the funeral in a body. The funeral was a most impressive one and was carried out under the suggestion of his intimate associate Dr. Parkhill. The Denver City Troop of which he was a member, preceded the funeral procession to the cemetery, and following the hearse was Dr. Mager's favorite horse, with bridle and saddle on, and the empty boots of its late rider fixed in the stirrups. Dr. Mager's genial disposition made him many warm friends and his professional standing was unquestioned. His death occurred July 13th, 1897.

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No. 8.

Editorial.

The American Medical Association and Denver.

Dr. Edward Jackson, formerly located temporarily in Denver, writes encouragingly in the *Philadelphia Polyclinic*, of Denver and the American Medical Association:

"The meetings of the American Medical Association have grown to be large gatherings; and the number of places at which a successful meeting can be held has, therefore, correspondingly diminished. Within the last ten years, meetings have been held in Newport, Nashville and Atlanta, which are remembered by those who attended them as both enjoyable and scientifically successful. Yet there was some feeling that the accommodations were rather crowded, and the grumblers found plausible pretexts for the indulgence of their disagreeable characteristic. Only the exceptional facilities of Newport for entertaining large numbers of visitors made the meeting in such a small city at all practicable.

Members who have not kept pace with the geography of the West and may fear difficulty in this respect at Denver, however, should look into the matter. They will find that Denver has a population greater than that of the three other cities mentioned, taken together, and proportionately better facilities for entertaining large gatherings, as it has demonstrated to such bodies as the

National Educational Association, and the Knight Templar's Conclave.

Much of the satisfaction felt at the Philadelphia meeting was due to the close proximity of the General, Section and Committee Meetings, and the Registration Office, Exhibit Hall, etc. To secure the same advantage of location, the Denver Committee has an equally good opportunity, and is wisely using it. In this respect, it will have nothing to fear in comparison with this year's meeting.

* * The meeting will give an opportunity for a practical course in climatology, such as the profession of this country greatly needs. The subject of climate is a vast one. Little of it can be mastered in a week's time; and yet many a thoughtful physician making the trip to Denver will find he has learned more about it in the week than he had been able to get from years of reading. Facts with which he previously felt himself acquainted will arrange themselves in new combinations, and be clothed with new significance. Ideas, before nebulous and uncertain, will become definite and assume practical importance. All practitioners recognize the difference between book-knowledge and clinical experience, as regards the branches of medicine that receive their daily attention. Yet in regard to climato-therapy, most of them rest content with the scanty book-knowledge obtained from interested and partial observers.

If the meeting of the American Medical Association could draw to Denver 10,000 physicians, and keep them there for ten days, the practical gain in their efficiency as physicians would outweigh the benefit of a year's medical literature. It is to be hoped that a respectable portion of the 10,000 will be so attracted. * * *

The excursions in connection with the meeting will offer the pleasantest and most effective introduction to the whole region, and when these are over the visitor will be able to choose the best place in which to spend the remainder of his vacation; in recreation and building up health. If one must, he can there carry on literary work under conditions far more favorable than he could secure during the summer months in the dense, moisture-laden atmosphere of the Central and Eastern states.

† † †

That Vivisection Memorial.

The *Rocky Mountain News* since our last issue, has contained, under a big letter heading "Doctors Hard Hit," a lengthy communication from the Secretary of the Humane Society which was intended to be very caustic and severe upon the medical pro-

fession in general and the Memorial Committee of the state society in particular.

Talk is cheap, and there is always a plenty to do for those who want to mind other people's business. We do not care to enter into any controversy with this or any other representative of this humanitarian order. Its object is all right, if its devotees only had the wisdom and good sense to confine its work to reasonable limits. It is over-stepping these bounds when it seeks to hamper and discourage scientific investigation by such restrictive measures as this Senate Bill 1063 contains: So obstructive in fact as to amount to a practical prohibition—if the anti-vivisectionists had their way—to all investigation by vivisection or animal experiment.

The communicant to the *News* places a great stress upon the fact that the medical opponents to this bill are not conversant with its particular features. It is unnecessary that they should be. The general impression is corroborated by a minute study of the measure, and it is the general result of such meddlesome interference in the affairs of a learned, honorable, and we will add *humane*, profession by a set of people who are not free by any means from *sentimental crankism* that makes the idea abhorrent to every true physician.

A minute study of this bill brings out the fact already referred to that its restrictions if enforced by the agents or officers of these Humane societies, are practically equivalent to prohibition of vivisection at all. It is obviously the intention of these would-be reformers, having gained this coveted foothold in the District of Columbia, to incorporate their hysterical influence and control into the laws of every state in the Union. There is a sympathetic bond of sentimentality which unites these people as the self styled protectors of all "vertebrate animals" in general and perhaps horses, dogs and cats, in particular. But as vivisection has nowadays quite as much if not more to do with rabbits, guinea pigs and rats or mice, no distinction is recognized between the pain inflicted on these lesser grades, even to the vermin class, than on those of higher organization and breeding. The horse for instance, is a noble animal, endowed with a high order of sensibility. At least forty-nine out of fifty of the equine males one meets in public ways have had to be desexualized, yet who has ventured to compel the use of an anaesthetic during this painful operation!

The enucleation of an eye is not much worse so far as the pain inflicted is concerned than that other operation which has had to be performed on all the Texas and other steers which annually go to market. Why haven't these humanitarian protectionists gone into

the chloroforming business on account of these noble brutes in preference to throwing away their sympathy on rats, cats and guinea pigs!

Take into account the operations named and the truly cruel process of *branding* cattle, on our plains, by burning huge marks into their hides with red-hot irons, and we have a total of pain inflicted which is as a million to one for all the pain thoughtlessly caused by vivisection!

The truth is, as the complainant mentioned of the Humane Society acknowledges, there is very little vivisection done anyway, and that which is done in our well regulated medical colleges and bacteriological laboratories is not by any means done in a spirit devoid of humane instincts, but it is done usually with a profound desire to benefit the human race thereby. There is great need of more of it and its supporters should not be discouraged, the good which may result is neither esteemed nor recognized by these organizers who would set themselves up as the judges and correctors of the medical profession. For who would be the "commissioners" to see to the enforcement of such a law as they desire passed except the tools of the Humane Societies which had been zealous in having the obstructive law enacted. We recognize that that would be the natural result. It is no wonder, then, that physicians, to use the words of this Humane Society's Secretary, "feel that a hue and cry is raised and their profession is in danger of discredit by ignorant, prejudiced and sentimental outsiders." They do not want, neither do they deserve, to be put under any such surveillance.

It is a meddlesome piece of business and a reflection upon their humanity, which almost to a man the medical profession will not tolerate. There may be cranky exceptions—a man has even been known to have hysterics—but they are very few. As a rule all prominent medical societies, national, state and local have taken some decided action against the passage by congress of this anti-vivisection bill. And why, because its "restrictions" as before stated amount to a practical prohibition, to-wit: In that "all vertebrate animals" to be experimented on are included, that a "license" from the Commissioners (to be appointed) is in all cases required no matter how trivial the experiment, that the animal, no matter how low in degree, "must, during the whole of the experiment be completely under the influence of ether or chloroform," that officers of medical schools must not only certify that the experiment is "absolutely necessary," but that "no other animal is available for such experiment," except "an animal similar in constitution and habits to a cat or dog," that these commissioners may not only choose the

time and place for such experiments and compel a "registration" of the same; that these commissioners are bound to limit these licensees as to the age of the licenser, or his graduation from a medical college; that these commissioners may require these licensees "from time to time to make reports to them of the methods employed and the results of such experiments in such, from and in such details as the said commissioners may require;" that "four inspectors, who shall serve without compensation," (presumably from these interested reform humanitarians) shall be appointed, "who shall have authority to visit and inspect the places aforesaid, and who shall report to the President of the United States from time to time the results of their observations therein, which shall be made public by him;" that the application for such license must be signed by three physicians "actually engaged in the practice of medicine in the District of Columbia," and also a professor in a medical college there; that this certificate is limited to a given series of experiments; that a copy of said certificate must be forwarded to said Commissioners and not be in operation till one week after; that these Commissioners may arbitrarily "at any time disallow or suspend any certificate given under this section."

Just think of all that, and with penalties added of from one hundred and fifty to three hundred dollars or six months imprisonment! Will anyone care to do any vivisection in Washington the place above all others in America where scientific research ought to be furthered and encouraged! Does anyone now wonder that the only thing a self-respecting physician has to do, whose life work and purpose stand for the preventive of disease and relief of human suffering, to is howl with all his might and main against the perpetrator of such a monstrous act as would be the passage of this "Senate Bill 1063."

CHARLES DENISON.

† † †

The Permanent Secretary of the American Medical Association.

The Cleveland Journal of Medicine makes the following editorial comment on the permanent secretary of the American Medical Association. We haven't heard that the Cleveland editor is a candidate for the position:

Universal comment upon the inability of the permanent secretary of the American Medical Association to properly attend to the duties of his position was heard at the Philadelphia meeting and is to be found in many of the journals now in their remarks upon that meeting. The position is a life one and properly so it would seem. Many attempts to remove the present incumbent have been made in the past by making the position one requiring annual election,

which is an awkward way of reaching the desired result. Such attempts have been met by promises from the friends of the present incumbent that if allowed to serve one more year he would then resign. As these promises have dissipated in thin air, the time has come to speak plainly upon the matter. The future success of the Association depends upon the placing in the position of permanent secretary a young man of high aims and possessed of administrative ability, who will work untiringly for the welfare of the Association. It is a difficult position and deserves adequate remuneration.

To avoid further scandal and occurrences more deplorable than those of the past, the friends of the present secretary should see that he does now or before the Denver meeting, resign and allow a younger and more capable man to have the place. This matter, while unpleasant, is one of the utmost importance to the welfare of the Association, as has been keenly realized by all who have attended the meetings of the last few years. If the journals and the leading members take this matter in hand in the proper spirit it can be settled promptly and satisfactorily. Delay will certainly be detrimental to the best interests of the Association.

† † †

Did You Ever See a Case of Colpootersis?

One of the crack quacks of Denver has recently been distributing around the city a circular which gives an appalling list of "diseases" that can be successfully treated by her. The following extract shows a few of the more wonderful:

"Dr. ——— treats all diseases that ever afflict women, such as Colpo-Hysterectomy, Interstitial Endo, Trachelorrhaphy, "Fibromata (Interstitial Polypoid) Subperitoneal Metretic Type and Introligamentous," Sarcoma Cysts, Colparrhaphy, Uterine Cough, Colpo-Hysteropexy, Procidencia Ovaritis, Myomectomy, Oophorectomy and Colpootersis."

The doctor would do well to purchase a medical dictionary with the proceeds of the next case of "Colparrhaphy" she treats.

C. J.

Seasonable Suggestive Therapeutics.

Denver had seventy-six cases of typhoid fever reported in July. The number is still on the increase. Probably every practitioner in Denver will see cases of this fever this summer. The question of treatment can be briefly reviewed with benefit by every practitioner. This can be embraced under a few heads.

I. "Rest and Diet."

2. "Reduction of Temperature."
3. "Treatment of Special Symptoms."
4. "Treatment of Convalescence."
1. Absolute rest in bed. Milk. Six to eight ounces every two hours.
2. Sponging. Antipyretics. All of which have to give way before the Brand bath. This consists in putting patient into a full bath at a temperature of 70° F., and keeping him there for fifteen minutes, vigorously rubbing him all the time, and keeping a cold compress to his head. This for a temperature of 102.2° F.
3. For diarrhoea, lead and opium; for constipation, enema; for haemorrhage, absolute quiet and cold to abdomen, with peptonized milk or no food at all for hours. Lead and opium in full doses. For tympanites, turpentine ten minim doses every four to six hours with reduction in amount of milk taken. For pain due to meteorism, stupes or poultices to abdomen. For sleeplessness, trional in fifteen grain doses; occasionally morphine if necessary.
4. No solid food until temperature normal for one week. Then a soft boiled egg in the morning. If no temperature, later some thoroughly softened milk toast, then a small quantity of well boiled rice. Finally tender meat and then soft vegetables.

As some medicine seems to be expected during the course of typhoid fever one can give salol grs. v, every four hours, dilute hydrochloric acid gtt v or x every three or four hours or the Woodbridge plan of medication can be instituted. Thousands of other remedies have been tried and one by one discarded. With proper bathing facilities the need of medicine is very slight.

From Our Exchanges.

The thyroid gland is recommended as an efficient galactagogue. The dose given is from three to five tablets a day.

Dr. Dickson recommends for a pessary, a child's rubber ball $2\frac{1}{4}$ inches in diameter. It is compressed and put in the vagina and when expanded holds the uterus up nicely.

Dr. DeWitt, of Cincinnati, is using Europhen with success in pulmonary tuberculosis. He gives it both internally and by inhalation. The commencing dose is one grain every four hours, increased to two grains in a week's time. By inhalation a 5% solution in A. C. E. mixture, a half teaspoonful at a time is inhaled from a bottle every two hours.

"There was a young lady called Margery,
Whose head was a walking menagerie.
Folks said 'You should wash'
But she answered, 'Oh, Bosh!'
I'll apply some unguentum hydrargyri."

—*From New York Medical Journal.*

From Journal of Am. Med. Ass'n.—The committee on rates to Denver for the American Medical Association in 1898 has been appointed by President Sternberg as follows: Dr. W. H. Daly, Pittsburgh, Pa., chairman; Wm. Pepper, Philadelphia, Pa.; X. C. Scott, Cleveland, Ohio; J. D. Griffith, Kansas City, Mo.; C. M. Drake, Atlanta, Ga.; L. H. Montgomery, Chicago, Ill.; H. O. Marcy, Boston, Mass.; J. W. Graham, Denver, Colo. The President says: Dr. Daly writes that the committee is already industriously at work and that a rate of one-half and thirty days time seems to be the certain outcome of their labors.

Calomel as a Diuretic.—Waste of good paper.—Think of making a diagnosis on this history: "*Editor Alkaloidal Clinic*:—My husband complains of dizziness, often staggers and comes near falling. He complains most in the morning. He is weak, though his appetite is good enough. He is fifty-five years old. I tested his urine and found it free from albumen, and acid in reaction. I gave him calomel in small doses, as his liver was not acting. It acted upon his kidneys, but the dizziness continues. I have also given strychnine and potassium iodide. Also please give me a good remedy for cystitis in an old lady."—*Mary L. Cox, M. D., Upper Penasco, N. M.*

Book Reviews.

EYE-STRAIN IN HEALTH AND DISEASE:—With Special Reference to the Amelioration or Cure of Chronic Nervous Derangements without the Aid of Drugs. By Ambrose L. Ranney, A.M., M.D. With 38 woodcuts. 8vo, pp. viii—321. The F. A. Davis Co., Philadelphia. 1897.

The author has, previous to this time published monographs on this subject and this work is an outcome or rather a compilation of these. Through them his readers have become familiar with his peculiar views on the subject, and with the extra care and attention to details in his numerous and varied cases cited therein, will probably have the effect to draw attention to his work.

He thinks an unnecessary amount of nerve-force is wasted through eye-strain, and that if unchecked will produce what we call in the financial world "bankruptcy." His theory goes to show that in this state of "nerve bankruptcy" many constitutional diseases are

developed, and in many cases of inherited tendency are due to the inefficacy of the visual organ.

Dr. Ranney has done an important service to medical science in giving book form to his personal experience and observations in this direction. His literary style is excellent and his assertions are made direct and pointed. His book contains all the latest knowledge of Eye-Strain. Its typography and binding are of a high grade.

DISEASES OF THE EAR, NOSE, AND THROAT, AND THEIR ACCESSORY CAVITIES:—
A Condensed Text-Book. By Seth Scott Bishop, M.D., LL.D. Illustrated with One Hundred Colored Lithographs and One Hundred and Sixty-Eight Additional Illustrations. 8vo, pp. 496. The F. A. Davis Company, Philadelphia, New York and Chicago. 1897.

This book contains the personal experience and views of the author expressed in a very clear and concise manner. He states in the preface that the book is not intended so much for the specialist as for the student and general practitioner. We feel that it will pay anyone to read it, be he specialist or not. It is refreshing to have an author express his individual views openly and alone, so that it does not become necessary to delve into a mystic labyrinth of entangled ideas advanced by others to learn what the author's own views are. There is no mistaking Dr. Bishop's meaning. It is nowhere veiled in obscurity. There are some statements upon which we would take issue with him, but who could write a book conforming to the views of all? We are profoundly impressed with the author's faith in camphor-menthol in lavolin. We have been looking for an agent that would prove of such universal value.

Disease of the mastoid is handled in a masterly manner. The subject is simplified and made very plain. The description of the operation of Schwartze and Stacke are so plain and the illustrations so perfect that a novice can comprehend them.

We should like to see more space devoted to the use of the tuning fork. The author lacks his usual clearness in his diagnosis of disease of the middle and internal ears. The reader might be inclined to place too much faith in the subjective symptoms and objective appearances of the drum head. So much depends upon locating the exact site of the disease. Intelligent treatment can not be carried out unless we have learned where the disease is situated. Such facts having been determined, it may be advisable not to institute treatment at all. The proper use of the tuning fork together with the subjective symptoms and signs is the most certain means of determining the exact site of an aural lesion.

The author does not advocate the use of the eustachian catheter,

but recommends his improved inflator. We see no good reason for discarding an instrument of such precision as the catheter. The amount of air admitted into the tympanum can be much more accurately measured with the catheter than with any other instrument. It is especially useful when only one ear is involved or when one eustachian tube is more patent than the other; in addition, medicinal agents can be introduced into the tube direct and not all over the nose and pharynx.

The chapter on hay fever is excellent. We endorse every word of it. It will pay every general practitioner to read this chapter. The same may be said of the chapter on diphtheria. If the book contained only these two chapters it would be worth the price asked for it.

We do not admire Bishop's manner of handling diseases of the tonsil. He confounds quinsy (peri-tonsillar abscess) with acute follicular tonsilitis and mixes up the whole subject of tonsillar disease until a beginner in laryngology might readily believe that quinsy covers all the acute diseases to which the tonsils are subject.

G. MELVILLE BLACK.

THE EYE AS AN AID IN GENERAL DIAGNOSIS:—A Hand-book for the use of Students and General Practitioners. 248 pages, illustrated. By E. H. Linnell M.D. The Edwards & Docker Co., Philadelphia, 1897. \$2.

This book attracted our attention. Any thing written to increase our knowledge in diagnosis demands attention. Dr. Linnell has presented the subject attractively. The book can be of the greatest service to the general practitioner. In Chapter VI he tabulates ninety-four diseases which present more or less characteristic eye symptoms.* To most of us this comes as an astonishing statement. The diseases named not only include the diseases of the nervous system, but also those of the blood and principal viscera. The appreciation of these manifestations can thus be of the greatest assistance to the physician and alone are often capable of calling the attention to an early stage of a general disorder. The book is one that we can commend very highly and it ought to have a large sale. It is unique in its scope.

The book is well made, finely printed and nicely illustrated. The Edwards & Docker Co., are to be congratulated upon presenting this book.

Books for review in September: Lippincott's Dictionary. Stern's "Urinalysis." International Clinics.

A physician with offices well located and furnished, desires to rent office hours to some physician engaged in some special line of work. Address R. Care of this Journal.

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A Scientific Medical Journal, Published in the Interest of the Profession of the Great West.

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VOL. III.

DENVER, COLO., SEPTEMBER, 1897.

No. 9

Original Communications.

REPORT OF SURGICAL CASES.

RUPTURE OF MIDDLE MENINGEAL ARTERY WITHOUT FRACTURE; MAMMARY CARCINOMA; PERIOSTITIS OF ULNA FOLLOWING TYPHOID.

By LEONARD FREEMAN, B.S., M. D.,
Denver, Colo.

Professor of Surgery Gross Medical College; Surgeon to Arapahoe County Hospital and St. Anthony's Hospital.

A vigorous man, about thirty years of age, addicted to frequent sprees, while under the influence of liquor, fell backward from the second step of a flight of stairs, striking the left side of the occiput upon a brick pavement. He was confused for a few moments, but soon regained control of himself and entered the house. Nothing worthy of remark was noticed in his actions for seven hours. He then suddenly became semi-comatose, with incoherent speech. At the end of seventy-two hours, the stupidity having in the mean time increased, he manifested some weakness on the right side. In attempting to sit up in bed, which he would at times do when partially aroused, there was a tendency to fall to the right. Ninety-six hours from the time of the injury, I saw the patient in consultation with Dr. E. P. Hershey, who had already made a diagnosis of intracranial hemorrhage. The symptoms had increased slightly, but it was not until the following day that paresis, amounting almost to paralysis, became at all marked. Stupidity was great, although certain questions, when insisted upon, were answered in mono-syllables. The pupils showed nothing abnormal. There were no signs of fracture of the skull; in fact not even a bruise of the scalp could be detected. The pulse was somewhat slow and full, but respiration was neither labored nor stertorous.

A trephining was done slightly below and anterior to the left parietal eminence. After turning down a large horseshoe flap, careful search was made for a fracture; but neither at that time nor during the subsequent steps of the operation could any evidence of a break in the bone be detected. As much as a teacupful of extradural clot was removed, the greater part of which lay posteriorly, portions being so adherent as to require the use of a sharp spoon in loosening them from the dura. Bleeding from both the anterior and posterior branches of the middle meningeal artery became profuse as soon as the coagulated blood had been scooped out. A second trephine opening was made over the bifurcation of the middle meningeal, and an attempt made to secure the trunk of the artery with catgut. The hemorrhage not ceasing, and the patient's condition becoming suddenly alarming, the cavity between the skull and dura was packed with a considerable quantity of gauze, the scalp partially united, and a firm dressing applied.

Shock and hemorrhage were the probable causes of the sudden collapse. The pulse became weak and thready and so rapid that it could scarcely be counted—at least 180. External heat and stimulants were ordered, and large quantities of hot salt-solution thrown into the rectum at short intervals, which produced rapid improvement.

Considerable oozing took place during the course of several days. On the fourth day the gauze packing was removed; an attempt to do this on the second day being followed by hemorrhage. In a few more days paralysis had disappeared and the mental faculties had returned to normal. On August 20, the patient was able to shave himself with the hand which had been paralyzed.

At the present time, ten months after the operation, the man is in possession of his usual mental and physical powers.

It is interesting that rupture of the middle meningeal artery can occur from an apparently trivial injury without fracture of the skull and without even a perceptible contusion of the scalp. This rupture without fracture is uncommon, but not so uncommon as is generally supposed, Jacobson having observed it four times in seventy cases. The phenomenon probably results from a temporary change of shape of the skull due to a blow, which momentarily separates the dura from the skull, tearing the artery where it is adherent within its bony canal. The blow need not be over the artery itself. It may be upon the opposite side of the head, or even upon such a remote part as the occipital region. It is also worthy of note that so extensive a hemorrhage could have taken

place without producing pupillary changes or stertorous respiration; but this can be accounted for to a certain extent by the slowness with which the bleeding undoubtedly occurred, which would also explain the delay in the appearance of paralysis. That the clot lay in greater part, posterior to the motor region, aids in clearing up the symptoms.

A second case was that of a woman of thirty-five, the mother of a child seven years of age. She had undergone two operations for tubercular glands of the neck, one five years ago, and the other some four months previous to coming under my observation. A tubercular affection of the lungs of moderate severity had existed for several years. On January 4, 1897, a small, hard, tender nodule was noticed in the upper and outer quadrant of the left breast. There was no adhesion of the skin or retraction of the nipple, and no axillary glands could be felt. Carcinoma was at once suspected by the physician in charge; although, considering the history of the patient, tuberculosis was not improbable, especially as positive signs of malignancy were absent. An exploratory operation was made by Dr. Parkhill on March 7, during which it was difficult to detect any tumor whatever, the gland structure appearing almost normal when incised. Some thickening, however, was observed and carefully removed, together with a considerable portion of the surrounding mammary tissue. Prompt union by first intention took place.

Four sections from different portions of the growth were examined by a competent microscopist, which indicated nothing more than a simple fibro-adenoma.

Shortly after the operation-wound had healed a slightly tender induration was detected near the upper extremity of the cicatrix. Although regarded with suspicion, this nodule was naturally referred to mastitis following surgical interference, especially as it did not increase in size during the next two weeks and the tenderness seemed to grow less; in fact after a time the induration appeared to diminish slightly.

I saw the case on May 1, 1897, with Dr. W. A. Jayne, about two months after the operation. There had recently been some increase in tenderness, a little pain, and a slight enlargement of the growth. We found an ill-defined, irregular induration, as large as the bottom of a wine-glass, in the upper and outer portion of the mamma. There was no retraction of the nipple and no glandular enlargement in the axilla. The skin was slightly adherent at one

point, but this could be easily referred to the results of the previous operation. In spite of the negative microscopic examination and the extreme rapidity with which the growth had reappeared after removal, a diagnosis of carcinoma was made for the following reasons: 1st.—The patient although comparatively young, was within the "malignant age." 2d.—The tumor, although thoroughly removed had returned. 3d.—The wound from the operation had healed perfectly and without inflammation, hence there could be no reason for the development of an extensive mastitis. 4th.—If mastitis were present it should tend to decrease instead of increase, especially as no irritative influences had been in existence. 5th.—The patient's health and strength were visibly declining without apparent cause.

Immediate removal of the neoplasm was strongly advised on account of the rapidity of growth, the apparent freedom from involvement of the glandular system, and the impossibility of determining how soon the line between curability and incurability from an operation might be passed.

On May 2, I amputated the breast, first making an exploratory incision, a precaution which should always be observed. The irregular induration was quite extensive, hard, white, and fibrous, and faded gradually into the surrounding tissues. No "cancer-juice" could be squeezed from the cut surface, but the macroscopical appearance was nevertheless that of carcinoma. There appeared to be two distinct foci of disease, more or less separated by normal glandular tissue. The fat surrounding the upper and outer portion of the breast had that dry, granular feeling so characteristic of malignancy. Even after opening well into the axilla no enlarged glands could be felt, and it was only after careful and extended search deep in the axillary contents that several lymphatics, the size of small peas, were detected and removed, together with the surrounding adipose tissue. The entire pectoral fascia, together with a portion of the muscle, was removed, and a large area of subcutaneous fat.

The wound was closed without drainage and union by first intention obtained.

A microscopical examination of the tumor removed at this second operation demonstrated beyond doubt its carcinomatous character—a fibro-adenocarcinoma, the fibrous tissue being largely in preponderance. On careful re-examination of the sections previously made it was possible to detect, in the light of the knowledge subsequently gained, one or two suspicious points where a few cells seemed to have broken through the basal membrane of

the glandular structure; but this feature was not at all distinct and might easily have been referred to inflammatory changes.

This case serves to emphasize strongly the fact, often lost sight of, that clinical history and observation are sometimes more valuable than a microscopic examination. Not that we should under-rate the value of the microscope in the diagnosis of tumors, but we should be careful not to depend upon it to the exclusion of all else. This position will be appreciated when we consider that tumors are frequently mixed in their character, one portion being benign and another malignant, so that one, or four, or even twenty sections may not reveal the true character of the growth. There is nothing more valuable than the microscope when its dictum is positive, but when it is negative its results may be misleading.

We are accustomed to regard those carcinomata composed largely of fibrous tissue as of slow growth; but in the present instance a fibrous carcinoma returned and increased in size with marvelous rapidity

We also have impressed upon us the imperative necessity of thoroughly exploring the axilla in all cases of suspicious mammary tumor. "Exploring," however, is not a good word to use in this connection. "Cleaning out" expresses the idea much more clearly, as it is often impossible to detect small infected glands until the axillary fat has been taken away. A few days ago I had occasion to remove some tubercular glands from the region in question. After taking out one or two and finding myself well in from the surface without being able to feel any more, I concluded that my work was finished. Luckily I decided to search a little further, and was rewarded by discovering three or four additional glands, one of them as large as the last joint of a thumb.

The idea that tubercular subjects are never attacked by cancer has been so thoroughly exploded that the present case is hardly worth mentioning in that connection.

A young man, twenty-five years of age, who had never had syphilis, presented a considerable swelling near the lower extremity of the right ulna,—a spindle-shaped enlargement of the bone itself, together with thickening of the soft parts. A crater-like depression existed upon the outside of the bone, the tumor being softer at this point. The appearance was that of an osteo-sarcoma, but a review of the symptoms and history lead to a different diagnosis.

About December 1, 1895, the patient entered upon an unusually severe attack of typhoid fever, which lasted, with a relapse, until

the middle of March. During the latter portion of this period a suppurative cervical adenitis occurred.

Some pain and tenderness was felt about the wrist during the end of April; but it was not until the beginning of May that the bone and its coverings became perceptibly thickened. When this took place the symptoms grew less severe, exhibiting subsequently marked variations in intensity at longer or shorter intervals.

The swelling gradually increased until I saw the patient on October 3, 1896. Several considerations led to the diagnosis of so-called typhoid periostitis, in spite of the fact of its extreme rarity at the lower extremity of the ulna, and the comparative frequency of osteo-sarcoma in this situation: 1st.—The affection had made its appearance reasonably soon after an attack of typhoid fever. 2d.—A greater amount of pain and tenderness had existed than is usual in osteo-sarcoma. 3d.—An exploring needle could not be made to penetrate the bone at any point; while penetration would probably have been possible in case of a central sarcoma as large as the tumor under consideration, especially one which presented so marked a depression upon its bony surface. 4th.—The very existence of such a depression, with a solid bony base, was in favor of a periostitis which had given rise to an excessive formation of new bone around a center of greatest infection. 5th.—With a hypodermic needle a drop or two of clear, syrupy fluid was obtained, reminding one of a periostitis-albuminosa. 6th.—With rest and moderate pressure the swelling of the soft parts disappeared in the course of three weeks, and although the bony enlargement still remained, the pain and tenderness had almost completely gone, and no more fluid could be obtained by puncture.

The question of an accurate diagnosis was of so much importance, the retention or the loss of a right arm depending upon it, that it was considered advisable to obtain a skiagraph of the part in hopes of throwing additional light upon the subject. It was argued that if a central sarcoma were present the bony covering would be sufficiently thinned to permit the more ready passage of the Roentgen rays, leaving the photographic shadow lighter at that point. If, on the other hand, the bone had been thickened by a periostitis, the shadow would be, if anything, increased in intensity. At the least, a comparison of skiagraphs taken at different times would indicate if the tumor were increasing in size or not. The picture obtained shortly after I first saw the case showed no thinning of the bone, but perhaps a slight increase in its thickness. The lateral depression was distinctly outlined (Fig. 1.)

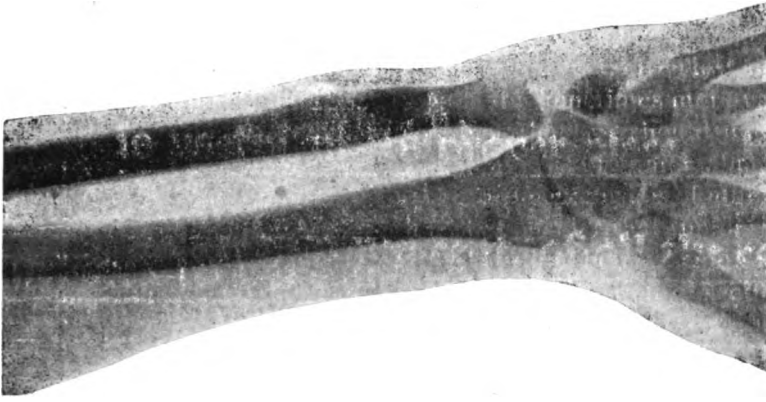


Fig. 1.

Another skiagraph was taken at the end of about three months. (Fig. 2.) It was readily seen that the thickening of the bone, as compared with the remainder of the shaft, had materially lessened. This was assumed to be positive corroborative evidence that the affection was at least not sarcomatous in its nature.



Fig. 2.

A relapse of the trouble occurred on March 1, 1897, and by March 14 considerable swelling had taken place, with fluctuation at one point corresponding to the bony depression already mentioned. Pain and tenderness were not great, and there was neither redness nor oedema of the skin. General symptoms were absent. A puncture was made with a sterilized hypodermic needle, with strict precautions as regards asepsis, and a small quantity of syrupy, bloody, purulent fluid removed, with which a section of sterilized potato in a test-tube was at once inoculated. Under the microscope this

fluid contained a moderate number of pus-corpuscles. No micro-organisms could be detected, even with careful staining.

At the end of two weeks no bacterial growth could be seen with the naked eye upon the surface of the potato, which is strongly characteristic of cultures of typhoid-germs, but a small scraping examined in a hanging drop showed quantities of bacilli having the size and shape of those found in typhoid. Other micro-organisms were absent.

Since the removal of the pus-like fluid all symptoms have disappeared, although some enlargement of the bone still remains and will probably be more or less permanent.

Typhoid periostitis sometimes persists for a long time after the disease itself has disappeared, and live bacilli have been detected at the end of many months or even years—thirteen months in the case which I have just reported. The purulent material which is often found is usually rather in the nature of a more or less syrupy fluid, containing broken down cells, fatty detritus and a moderate number of leucocytes, than it is in the nature of true pus. Ordinary pus may be present, however, when the infection is a mixed one.

Periostitis is not common following typhoid fever, although it is not very rare. Its usual seat is upon the anterior surface of the tibia, or at the junction of the ribs with their cartilages, although other bones are sometimes affected—the clavicle, the femur, etc. The lower end of the ulna is rarely attacked, and when it is, confusion in diagnosis may result owing to the fact that this is rather a favorite site of osteo-sarcoma. Before attention was called to this post-typhoid condition, which has been within the last few years only, it is not improbable that limbs have been amputated with the idea that malignant growths were present.

NERVOUS DISORDERS SIMULATING PERITONITIS.

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In taking up this section of the symposium it is not necessary for me to state that the diseases of the nervous system which simulate peritonitis are few in number; in fact I know of no organic affection of the brain or spinal cord that produces symptoms similar to those of the subject under discussion. Although in certain disturbances of the nerves we may have subjective and objective

signs which may resemble the symptoms of inflammation of the peritoneum, yet these have characteristics which will enable one to come to a definite conclusion as to the nature of the case.

Kalantarian* says, in eight examinations of the solar and hypo-gastric plexus in persons who had died of acute peritonitis, changes which he regards as inflammatory had occurred, with subsequent opaque swelling of the nerve-cells, fatty degeneration and brown pigmentation.

The diseases of the nervous system which resemble more closely peritonitis are first the functional diseases—as hysteria, and secondly the various forms of visceral neuroses. When we take into consideration the numerous manifestations of hysteria, and that the symptoms are excited by some slight peripheral irritation which may be due to vaso-motor disturbance in some of the pelvic organs it is not surprising that the symptoms of peritonitis may be produced. Simulation of acute diffused peritonitis by the hysteric is a rare occurrence and is only found in the most severe cases of functional disease, but in women who are of a neuro-pathic temperament the chronic, localized, inflammatory affections are more closely counterfeited.

All the symptoms of peritonitis may be present in a case of hysteria, but as a rule the pain of hysteria is psychical and usually predominates on the left side of the body; and is out of proportion to the peripheric irritation in which it seems to originate, both in intensity and duration. It often develops and ceases like other hysterical symptoms, under the influence of moral impressions; is capable of surviving the complete subsidence of peripheric irritation, whereas, the opposite is the case in true peritonitis.

The locality of hysterical pain and tenderness may be the same, and the most frequent seat is the abdomen. A slight touch of the skin produces more distress than deep pressure, although, in neuro-pathic patients deep pressure in the left hypochondric region causes intense suffering. Deep pressure in true peritonitis exaggerates the symptoms to a greater extent than in functional disturbances. Hysterical pain may begin locally, as, does the pain in true peritonitis; diffusing from the spot at which it first appeared into others not adjacent, but often connected with the first ramifications of the same nerve-plexus. The diffusion usually exceeds that of peritonitis,

Vomiting is an early and troublesome symptom of inflammation of the peritoneum, also of hysteria, although in the latter disease the vomiting is never attended with nausea, nor does it ever

* *Pepper's System of Medicine, Vol. II, page 1136.*

become fecal. Immediately after the chill in peritonitis the temperature rises very high, and the subsequent elevation is moderate, whereas in the neurotic case the temperature is normal or but slightly raised, although there are cases reported where the fever was high, but this is probably due to some manoeuvring or pressure exerted by the tongue on the bulb of the thermometer.

The pulse of the inflammatory affection is characteristic, in that it is small and wiry and in frequency out of proportion to the fever; in the functional affection it has not these characteristics, and in the majority of cases the beats per minute are normal in number; if they are increased the quality is full and strong.

In peritonitis frequent micturition may be present, less often retention of urine and the urine is scanty and high-colored; hysterical bladder disturbances are usual in retention and the urine is pale in color and plentiful. Constipation, anorexia, coated tongue and abdominal tympany, are common in both diseases, the latter being greater in peritonitis, sufficient to displace the apex beat of the heart, reducing the liver dullness and obliterating the splenic dullness. These symptoms may continue in hysteria until the patient presents all the symptoms of collapse or shock, but with careful observation and a diligent study of all the symptoms one would not be liable to make a mistake in diagnosis. In the pelvic forms of peritonitis which are generally chronic and occur in women, we could exclude hysteria by a careful digital examination of the pelvic cavity, although we must not forget the fact that all forms of local inflammation may determine the occurrence or position of hysterical symptoms, and the two diseases may occur at the same time, but by carefully weighing the symptoms a correct conclusion can be arrived at.

The neuralgias of the various abdominal organs may be either idiopathic or secondary to some organic change in the terminal nerves or in the viscera. Of the visceral neuroses the ones which are of particular interest to us and produce symptoms that may resemble peritonitis are gastralgia, enteralgia, ovaralgia and lumbo-abdominal neuralgia. In neuralgias of the viscera, the pain is deep seated, sometimes a dull heavy ache, sometimes of a boring character, rarely lancinating.

*"It does not dart like the pain of superficial neuralgia, but is either constant or comes on in waves which steadily swell to a maximum and then die away often leaving the patient in a state of temporary prostration." Not only do we have this one symptom of pain, but general disorders accompany the different neuroses as

* *Pepper's System American Medicine (Putman) Vol. V, page 1215.*

they do neuralgia of the cerebro-spinal system, for one portion of the nervous system cannot suffer without affecting the whole nervous organism. The symptoms which accompany the visceral neuralgias are reflex disturbances which may be of a serious nature as, vomiting, indigestion, constipation, loss of appetite and marked emaciation. It is very common to have associated with these various neuroses some other affection as migraine or asthma and these two diseases as a rule, accompany gastralgia.

The only form of peritonitis which gastralgia could be mistaken for, is that due to perforation of the stomach; the pain in both being referred to the back, chest or shoulders, tenderness, disturbances in circulation, tympanitis, but in neuralgia we do not have any rise in temperature and the pain is unilateral, paroxysmal, relieved by pressure, and in some cases by taking stimulants or food.

The patients do not suffer from the severe degree of shock as in peritonitis, although they may become prostrated and the history of previous attacks of neuralgia in other portions of the body would be an important guide in making the diagnosis.

Gowers says: "We are not justified in regarding as *enteralgia* either vague abdominal pains, which are not increased by peristaltic action or pain that occurs when the intestines are in energetic action, or in which there is conspicuous disturbance of the mucous membrane."

The pains in *enteralgia* are the same as in other neuroses; the two principle points of onset are the umbilicus and right iliac fossa, the concomitant symptoms are, distention of abdomen, hard abdominal muscles, prostration and severe collapse and the various other reflex phenomena which have been stated above.

In acute diffused peritonitis the pain may begin locally but soon becomes diffused, and is increased by pressure; the nausea, vomiting, distended abdomen and collapse are more or less continuous and have a protracted course.

In the majority of cases of neuralgia the patient is either a victim of hysteria or is suffering from anemia and especially in the visceral neuralgias we are aware that the pains occur at the time when the organ is performing its function. This is particularly the case in *ovoralgia*, and is not strange when we recall the fact that the ovarian nerves terminate in the blood-vessels and the consequent effect of any irritation is a dilatation of the vessels or a hyperaemia of the organs, which causes pain, localized tenderness and various other reflex phenomena that may be found in peritonitis. A careful digital examination would prevent an error.

It is not unusual to have abdominal pain that cannot be referred to the abdominal organs, which has no relation to the time of functional activity of the same. This pain is probably due to some disturbance of the sympathetic system of nerves. Pain is diffused, with paroxysms of exaggeration and is not increased by pressure, and its position is either above or below the umbilicus. The absence of other constitutional symptoms would exclude peritonitis.

THE CHARACTER OF PULMONARY CASES COMING TO COLORADO.*

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In looking over the field for a subject on which to present a few thoughts to-day, it occurred to me that we might, with advantage, consider a part of the material on which we have to work in our every day toil.

Our mountain state has a name, at home and abroad, as that of a great sanatorium for the treatment of pulmonary diseases. A veritable Mecca, to which all who suffer may come, bask in her sunshine, breathe in her aseptic air, imbibe her pure water, feast on her mountain scenery, and be restored to health and vigor. That there is a foundation for such an opinion existing, no one can deny. It is manifest at home in the many good things said about our climate by those living here, and from abroad by the varied condition of those coming to our state to be cured. Granting then, that the conditions exist, that are attributed to our state, we will turn our attention to those who come to us for relief.

What I may say in regard to the character of those who come must not be misconstrued into meaning a condemnation of the coming or sending of a certain class of patients; but rather let it be considered a plea for the early sending of pulmonary cases to Colorado.

In looking over my record of cases, I find, in the three years prior to January 1, 1897, I have record of 133 cases of pulmonary tuberculosis that came to my office for examination. These cases were all recent arrivals in the state and had come on their own accord, or had been sent by their attending physicians to get benefit from the climate. The basis for opinions expressed will be founded on an analysis of these cases. I will first call your atten-

*Read before the Colorado State Medical Association, June, 1897.

tion to the following footings, that will give at a glance many points of interest and food for future thought:

Males.....	72
Females.....	61
Married.....	68
Single.....	65
Age—Average years.....	29 $\frac{3}{4}$
" 20 years and under.....	11
" 20 years to 30 years.....	67
" 30 years and over.....	55
Average weight.....	113 lb
Expansion under two inches.....	87
Pulse above 100.....	76
Temperature above normal.....	71
Poor appetite.....	62
Digestion poor.....	57
Diarrhoea.....	19
Night sweats.....	81
Hemorrhages.....	49
Hemorrhage first symptom.....	11
Temperament nervous.....	126
Previous health good.....	81
" " delicate.....	52
Physique good.....	48
" delicate.....	85
Family long lived.....	54
" short ".....	80
Tubercular tendencies, yes.....	85
" " no.....	48
Lung affected, left.....	28
" " right.....	49
" " both.....	56
Duration of disease, 1 month.....	3
" " " 1 month to 1 year..	68
" " " 1 or more years.....	62
Stage of disease, 1st.....	28
" " " 2nd.....	47
" " " 3rd.....	58
Cured.....	15
Improved.....	52
No history and unimproved.....	24
Dead.....	42

While there is a slight plurality of males, sex does not materially effect the character of the cases. The percentage of improvements is slightly greater in the males—52.7.9% to 47 $\frac{1}{4}$ %. Hemorrhage was a little more noticable in males—39% to 44%. A few more were married than single. Social relations did not change character of cases or results obtained.

The average age was 29 $\frac{3}{4}$ years. We would be inclined to believe

this average too old if the figures did not show it; $8\frac{1}{4}\%$ were 20 years and younger; $50\frac{1}{2}\%$ were between 20 and 30 years, and $41\frac{1}{4}\%$ were over 30 years. The large per cent. over 30 years, and the high average age can only be accounted for by the fact that most young people do not have the money to change climates. The per cent. of mortality is less as the age advances. Under 20 years it was 64%; from 20 to 30 years it was 33%; and above 30 years it was $27\frac{1}{4}\%$.

The average age weight was 113 pounds. The heaviest patient was a man weighing 161 pounds, and the lightest a lady weighing 83 pounds. The majority of the number were fairly well nourished considering the disease.

The expansion was under two inches in 65% of the cases. In many cases this was not due to the extent of the disease, but to faulty habits in reference to breathing.

The pulse was above 100 and the temperature above normal in the majority of cases, 57% and 53% respectively. This we would expect from this class of patients. They come with a disease having these characteristic symptoms. The most of them were examined soon after a long journey and in a higher altitude.

Diarrhoea was present in $14\frac{1}{2}\%$ of cases. This does not include those cases temporary in character, due to indigestion. In the majority of cases this diarrhoea proved to be tubercular, was very intractable, and led on to a fatal termination.

Poor appetite and poor digestion generally went hand in hand. We note a few cases where the digestion is said to be good when the appetite is poor. No doubt the good report from the stomach is due to the want of desire for food. If the food were taken the stomach would fail to digest it properly.

Night sweats were present in 61% of the cases. Where noted as being present there was no doubt of their being due to the disease. It is not always an easy matter to determine whether a sweat occurring at night is due to the disease or to too much covering. The zeal of the patient to prevent taking cold by increased covering is often the cause of the sweat. We have endeavored to eliminate these cases.

Hemorrhages had occurred in 37% of the cases. The amount of the hemorrhages varied from half an ounce to several ounces. The frequency from once to a score or more times. Hemorrhage was the first warning of the disease in $8\frac{1}{2}\%$ of the whole number of cases. We say the first warning; the disease existed prior to the hemorrhage and the symptoms were so trivial as not to be noted. About 52% of the hemorrhagic cases have died. We do not attrib-

ute their death to the hemorrhage, but to the active, destructive disease advancing in the lungs. Where the hemorrhage precipitated the final issue of the case, death did not result from the direct loss of blood, but to septic pneumonia from the retention of the blood in the lungs and its subsequent decomposition.

Practically all the cases were of nervous temperament. There were but 7 that would come under any other classification, and these would be called phlegmatic or lymphatic.

The health prior to contracting the disease was reported as being good in 61 per cent. and delicate in 39 per cent. This shows us that those presumably in good health are not exempt from the disease. This susceptibility is explained by the fact that those in health take less care of themselves and subject themselves to exposures that bring them in a condition suitable for the invasion of the bacilli.

Somewhat in contrast with the last deduction is the following: The physique of 64 per cent. at the time of examination was delicate and that of 36 per cent. was good. This inverse ratio of good health and good physique admits of the following explanation. One is the patient's statement of his or her condition prior to the invasion of the disease, and the other is the physician's observation months or years afterward, when the disease has made many changes in the make of the individual.

Closely allied with the previous health and physique of the individual is the longevity of his family. Are his people long lived; in other words, is there resistance to the approach of disease in the family? We find that 60 per cent. of these cases came from short lived families. In the same line we see that 64 per cent. of the cases came from families having tubercular tendencies; some member of the immediate family, or grand-parents, or uncles, or aunts having died of "consumption." Of the 42 deaths recorded, 66 6-7 per cent. were from families having tubercular histories.

I found the right lung more frequently affected than the left, which is not in strict accordance with text book teachings. Both lungs were affected in a greater number of cases than either lung singly. The mortality has been $21\frac{1}{2}$ per cent. in those with the left lung affected, $28\frac{1}{2}$ per cent. with the right lung, and 42 per cent. where both lungs were involved. Why the per cent. of mortality has been greater in those cases in which the right lung is involved than in those where the left is diseased, I am not prepared to say. The cause for the much greater per cent. in those whose both lungs were affected is self-evident and requires no explanation.

The per cent. of those improved and cured is inverse to that of the death rate in each class.

Three cases came to Colorado within one month from first indication of the disease. To-day two present no evidences of the disease. The third died of tubercular meningitis after being in Colorado four months. Sixty-eight had had the disease for one year or less; 12 per cent. of these show no evidences now of the disease, and about 50 per cent. are much improved and time may show many of these cured. The remainder are dead, not improved, or no history of them. Of those who have had the disease for one year and more, 5 per cent. are cured, 49 per cent. improved, the remainder are dead, not improved, or no history. We note that the per cent. of cures lessen with the length of time the patient has had the disease. There is not as great a difference in the improved as one would suppose. It is to be explained by the fact that those who come to Colorado having had the disease one year or less, come in a more active period of the disease. Older cases, where the lung had become fibrinous, do not break down as rapidly.

Of more importance than the length of time since the disease began or was detected, are the changes that have taken place in the lungs. I wish to call your attention to the following table, showing at a glance what results have thus far been obtained from my cases:

Stage	Cases	Cured	Per Cent. Cured	Imp	Per Cent. Improved	Not Imp. No Hist.	Per Cent. Not Imp. No Hist.	Dead.	Per Cent. Mortality
1st	28	13	46 3-7	12	42 6-7	0	0	3	10 5-7
2nd	47	2	4 1-4	28	59 1-2	10	21 1-4	7	15
3rd	58	0	0	12	20 3-4	14	24 1-4	32	55

Here let me say you may think me a little previous in presenting a table on this subject so soon after the close of my series of cases. I have tried to be conservative and fair in my review of the cases, letting facts and percentages speak for themselves. The cures noted are those cases in which no signs of the disease are at present to be detected. You will note that I have not as great a per cent. of cures as many who have written on this subject. As improved, I have placed all cases in which the improvement is permanent to date. Many cases, owing to change of climate and surroundings, seem to improve for a time and then drop back; cases of this character are placed in the unimproved or no history.

It will be seen that those who do well, the cured and improved, in the first stage amounts to 89 2-7 per cent., those in the second to 64 $\frac{3}{4}$ per cent., and in the third to 20 3-4 per cent. The per cent. of those who do not improve, those from whom we have no history,

and the dead, are in inverse ratio to the former class: viz, 10 5-7 per cent., 36¼ per cent. and 79¼ per cent., respectively. I classify in the latter group those cases in which we have no history. They were cases sent away from here soon after arrival on account of altitude, and from whom I have no definite report. Being advanced cases of a character that we could not expect any favorable results, I have classed them with the unimproved.

There were 15 cases, about 11¼ per cent., (nine males and six females) who did poorly from the time they arrived here; the high altitude was detrimental to them. They were all in the third-stage of the disease and all died, either here or at home after proving that the altitude was not what they needed.

Of those who died, 9 or 10 per cent. had their lives extended from one to three years by coming to Colorado. Of course, this statement is only conjectural, and is estimated from my experience with like cases at 6000 feet altitude.

Taking the whole number of cases, we see that 50½ per cent. of all who have come have done well since coming. This is about 25 per cent. less than given by many writers on this subject. My cases were not selected in any particular. The next series of cases of like number may show a better result. Only a small per cent. (11⅓) of the whole number can be called cured, and these are of those who have been the longest in our state. How many more of the number, classified as improved, will go on to cure, time will determine.

All these cases were undoubtedly tuberculous. Where the lesions were not pronounced by physical exploration, an examination was made for bacilli and the physical examination confirmed.

The study of these cases presents several interesting points relative to patients coming to our state for their health. We can sum up the knowledge gained by their consideration in the following statements:

1. The number of cases in males exceed those in females. The per cent. of improvement is slightly greater in males. There is also a greater number of hemorrhagic cases in males.
2. Social relations make no appreciable difference in the character of the cases.
3. The per cent. of mortality diminishes as age advances. Before the tissues of the body become mature there is less resistance to the invasion of the disease.
4. The weight of the patient does not materially influence the activity of the disease, or condition of the lung. It is a favorable indication to see the patient gain in weight. Not on account of the

weight, but because it shows good assimilation, and that anabolism is greater than katabolism.

5. The pulse rate and temperature are indices of the presence of the disease and its activity, and when persistent, augur no good. A high pulse rate and an elevated temperature are incompatible with active exercise in high altitudes.

6. Poor appetite and poor digestion are elements that interfere with good nutrition. They are symptoms that are greatly benefited by any change of climate, surroundings and food. Therefore, all of our patients are benefitted for a time by coming to Colorado.

7. Diarrhoea of tubercular character is a very serious complication. The great majority of the cases, sooner or later, succumb to the disease here, or elsewhere. We think life is extended by coming, but have no cures to cite.

8. Hemorrhage is no barrier to coming to 6000 feet altitude. Where large cavities exist and destruction of lung tissue is progressing rapidly, it is better not to come. Other cases do well here and we do not find hemorrhages of any more serious character here than at lower altitudes.

9. Those families with tubercular histories furnish the largest percentage of cases, and these cases in turn furnish the largest percentage of deaths. Hence, the advisability of recommending a congenial climate as a prophylactic measure in those with a defective family or personal history. In estimating the chances of improvement in an incipient case, the family tendencies carry more weight than the individual personal history.

10. We found the right lung more frequently affected than the left, and both lungs were involved in more cases than either alone.

11. The percentage of cures lessen as the length of time the patient has had the disease increases.

12. The most important factor to be considered in a case on first examination is the stage of the disease. Other factors are important, as heredity, physique, age, diarrhoea, pulse, temperature, etc., in making up an opinion on the chances of benefit from the change of climate. But none are of as much importance as the present condition of the lung itself. The chances of recovery or improvement lessen as the stage of the disease advances.

13. Where there is extensive infiltration of the lung and softening has commenced, high altitude often proves detrimental.

14. Death in many advanced cases was deferred many months by coming to Colorado.

15. But few are injured by coming to Colorado, the great majority are benefitted, unless there be absolute contra-indications

why the patient should not come, we would say take your chances and come. You can not worsen your condition, and you are improving the only chance you have by changing your climate.

16. The changed condition of the patient coming to a high altitude, with different environments, makes it unwise for the home physician, hundreds of miles away, to presume to dictate the movements of the patient or direct the treatment. It is an injustice to the patient who spends his money to get all the benefit he can in the coming. It injures the reputation of the climate, because the treatment is not always adapted to the changed conditions and the climate gets credit for poor results. It is an insult to the physicians in Colorado, because the home doctor advises such a course, it reflects on their ability as physicians.

In conclusion, I want to say that the object of presenting this report is not one of criticism of our eastern confreres for sending their patients to Colorado, but rather to enter a plea for the sending of patients here earlier. More than half of all who come have done well. Many more have had their lives lengthened, and the others have had the satisfaction for themselves and their friends that they have made every effort to live. The motto should be, early detection and early protection.

POST ABORTIVE SEPSIS.

By P. E. HYRUP-PEDERSEN, M. D.,
Denver, Colo.

In presenting this paper I desire to bring before this honorable society a subject of vast importance for the medical profession and general public at large, and I do it inspired by purely scientific motives, and my object is to bring forth a discussion, through the medium of which more light may be thrown on the best methods of treating this fearful, fatal disease and thus save some poor woman from an early death.

This disease is closely allied to puerperal fever, and only differs from this in less severity of the symptoms, undoubtedly caused by the smaller size of the uterus and consequently smaller absorbent surface through which the ptomaines enter the system.

As a rule in sepsis of this kind we have to deal with a sapraemia or septic intoxication by the ptomaines of the micro-organisms, which have attacked part of the ovum left in the uterus after its contents have been expelled. The infection spreads rapidly from the dead tissue of the ovum to the endometrium and from

there to the body of the uterus or it may through the medium of the lymphatics, attack the broad ligaments with their enclosed structures, or it may instead of lodging in these nearby structures, infect other and remote parts of the body, viz: the liver, spleen and lungs, causing infection with degeneration of the tissues of these remote structures, leading to abscess formations and thus forming a pure case of pyemia, which almost always leads to death. The immediate cause of death is very often septic pneumonia, resembling the catarrhal or broncho pneumonia of the very young or very old.

The infection may involve the broad ligaments, causing a perimetritis or pelvic cellulitis, which may either be diffuse or localized, forming a pelvic abscess with all its sequelae, such as adhesions of the structures in the pelvic cavity, binding them together and displacing them, leaving the poor woman a miserable wreck the rest of her days. The infection from the pelvic peritoneum may involve the general peritoneum through the medium of the continuity of structure, or by the rupture of a pelvic abscess, causing a general peritonitis, which almost invariably terminates fatally.

Many of these cases do not extend so far, but terminate in a chronic metritis with its concomitant salpingitis, making the woman feel miserable with a constant pain in the back and in both iliac regions, more or less leucorrhoeal discharge, all the symptoms aggravated by menstruation, which is always more or less irregular, as a rule more profuse and lasting longer than usual. We have all had cases of abortion and labor, in which the patient for a long time, perhaps weeks, had a slight rise of temperature and pulse, and some discharge from the vagina, either of a purulent or bloody nature; these cases are nothing but a local form of septic infection and will as a rule get well spontaneously or yield to the curette.

The diagnosis of these cases is not difficult; we have as a first aid the history of interruption of pregnancy with subsequent discharge of the ovum, and later on the discharge from the outlet of the vagina, which may vary from a bloody, to a bloody serous, a serous or a purulent nature, and with an odor, which is not the fresh alkaline odor of the normal lochia, but varies from a slight fetor to a distinct gangrenous odor.

The diagnosis may be blurred by other conditions present, as in one of my cases in which it was called typhoid fever owing to the continuous fever and gastric disturbances plus an oophoritis dextra causing tenderness in the right iliac region.

The prophylactic treatment consists in early and complete evacuation of the uterus, and with that object in view it has been and is my practice when called to attend cases of this nature to

make a very careful examination, placing the woman in the dorsal position. If I find any symptoms of retained membranes I at once place her under an anaesthetic and under strong enforcement of the rules of asepsis empty the uterus thoroughly. If the cervical canal is widely enough dilated to allow the introduction of a finger I use this as a curette passing it all around the interior of the uterus while with the other hand on the abdomen I depress and steady that organ; if the cervical canal does not admit the passage of the finger I introduce a dull curette (the Recamier Roux) gently to the fundus, and curette the uterus thoroughly, following this with an intra-uterine douche of a one per cent. solution of lysol. I next pack the uterus and vagina tight with a ten per cent. iodoform gauze according to Dr. Anna Stuart's method described in the *New York Medical Journal* of September 26, 1896. My object is to stimulate uterine contractions and to assure complete emptying of the uterus as particles of membrane left behind after the curettement will be infiltrated in the meshes of the gauze and come away in twenty-four to thirty-six hours. For a few days the vagina is douched morning and night with a one per cent. solution of lysol. This much for prophylactic treatment. Wherever I have used it I have always had success and had the patient up and about in the course of a few days.

If the patient has had a chill or any rise of temperature and the vaginal discharge shows any signs of infection I do not delay, but place her as soon as possible under an anaesthetic and under the most vigorous antiseptic precautions I curette the uterus with a sharp curette as thoroughly as it can possibly be done. I do not alone remove the decomposed particles of the ovum, but the whole endometrium to which the infection has already extended. The uterine cavity is next douched with one per cent. of lysol of which at least three quarts are used. I next pack it tightly with ten per cent. iodoform gauze, which is removed after twenty-four to thirty-six hours. If the gauze then smells perfectly fresh it shows that all the diseased tissue has been removed, which of course, is good, but for safety's sake I start irrigating the uterus under antiseptic precautions with a one per cent. solution of lysol morning and night for at least a week after all abnormal odor has ceased.

If after the removal of the packing the general symptoms of sepsis, the temperature and pulse keep up, it shows that the curettement was performed too late and that other foci of infection have formed outside the endometrium. These must by all means be reached; if the vaginal discharge still shows signs of decomposition it shows that infection is in the uterine muscular tissues and

provided there are no symptoms of secondary infection in other parts of the body, complete vaginal hysterectomy is indicated and when we remember the low mortality of this operation it seems to me the patient ought always to be given this chance for recovery. By performing this operation in time we remove the different foci there are in the uterus and before others have formed, and as these cases as a rule are sapraemic, the result ought to be good.

For this condition other treatments have been advocated and are undoubtedly of good service; for example, continuous irrigation of the uterus, and steaming of the uterus; but as we are never sure that other foci have not formed deeply in the uterine walls or closely outside it, it seems to me that the radical operation is the most conservative and will yield the greatest number of successes.

If after thorough curettement with a sharp curette the general symptoms of chills, rise of temperature, rapidity of pulse, etc., keep up and if the uterine appendages, the peri-uterine tissues show involvement by their tumefaction and tenderness, a complete vaginal hysterectomy is indicated, as it insures the most complete drainage of the pelvic cavity, but the prognosis is, under this condition always exceedingly grave.

Should, after all the foci of infection in the pelvic cavity that could be reached have been removed, the symptoms of general infection continue and if other foci have formed in different parts of the body, surgery has been too late and we must depend upon nature to combat the disease and by strong stimulants, etc., help her do her work; these cases almost always prove fatal.

The streptococcus antitoxine and aseptolin have been tried and been reported upon by many writers very favorably while others have not seen any effects from their use whatever. I shall, however, give them a chance as soon as I have an opportunity to do so.

The ordinary medical treatment consists in stimulation to keep up the vitality of the patient, ergot, quinine and strychnine on account of their oxytoxic properties; for the fever, bathing such as sponge bath, tub bath, and the wet pack are indicated and are always preferable to other antipyretic remedies, as it tends to stimulate and increase the vitality where the others tend to slow the heart's action which at the same time weakens and thus lowers the vitality of the patient.

Case No. 1.—Miss R., age 19, seen by me in consultation with Dr. Dean, December 15, 1894. She had been sick in bed for three months and had been taken care of by another physician who diagnosed the case as typhoid fever on account of the continuity

of the fever, the diarrhoea (undoubtedly nature's effort to eliminate the poison from the system) pain and tenderness in the right iliac fossa due to an oophoritis dextra. The patient had a coated tongue, headache and many of the other symptoms due to typhoid fever; but on further inquiry she stated that her sickness started a few days after an early abortion and she had since then a bloody and later on a muco-purulent discharge from the vagina. The bimanual examination revealed an enlarged and very tender uterus, tenderness in both iliac regions, the right side being especially swollen and tender. Curettement was advised and consented to and assisted by Dr. Dean, who was in attendance and Dr. Hassenplug, I curetted the uterus carefully next day according to the rules laid down in this paper and the patient made a rapid and uneventful recovery. Although she was very weak, she called on me at my office in a week, and within two weeks resumed her vocation (dress-making) and has been doing well till this winter, then she had an attack as her physician tells me of pelvic peritonitis.

Case No. 2.—Miss M., age 22, seen with Dr. Denison on December 23, last. She had passed a catheter on herself and not being acquainted with the technique of asepsis, infection took place and she was sick for quite a while before the doctor was called in. I curetted the case as soon as I saw it according to the rules laid down and she made a slow and uncomplicated recovery.

Case No. 3.—Mrs. E., referred to me by Dr. R. L. Thorpe, of this city, age 28. I saw her the 1st day of January this year and found her septic with temperature 103, pulse 120 and a gangrenous discharge from the vagina. Assisted by Dr. Denison I applied the sharp curette with subsequent packing of the uterus and douching of the uterus but improvement never took place and the patient died seventeen days after the operation from septic pneumonia. That my curettement was thorough is shown by the fact that the gauze when I removed it had no abnormal odor, the broad ligaments with their contents (the uterine appendages) were never involved as shown by the absence of tumefaction and tenderness. Dr. Wetherill, of this city, saw the case in consultation with me.

Case No. 4.—Mrs. C., seen in consultation Jan. 5, this year. Her attending physician gave the history that she had had continuous fever and several chills and had been in bed for about three weeks with a bloody purulent discharge. Shortly before I saw her, general peritonitis developed preceded by a new chill and she had a rapid pulse and high temperature. The uterus was curetted, care being taken not to cause any disturbance by undue traction in lowering this organ. She made a stormy convalescence; with continuous

fever, but no fresh chills indicating that no further absorption of pus had taken place.

Case No. 5.—Mrs. D., seen in consultation with Dr. Denison. She was a hearty healthy woman, but had habitual miscarriages. I saw her in the middle of March when she had a threatened miscarriage, for which I gave her codeine and viburnum and told her to stay in bed a few days; she aborted in about a week and on April 11, Dr. Denison called me in to curette her. She had then been in bed ever since I saw her the first time. She was feverish and had had several chills. The uterus was curetted and packed as described above and the doctor took care of the patient afterwards. Recovery.

Case No. 6.—Mrs. F. I was called to assist Dr. Warren in curetting this case, on the 5th day of June. She aborted fifteen days previous, had been sick in bed, flowing constantly with fever and chills. Curettement according to rules laid down above. Uninterrupted recovery.

News Items.

Dr. F. E. Warren is taking a vacation in Michigan.

Dr. J. N. Thomas goes to New York City October 1st for an extended post-graduate course.

Dr. John Davidson, now of Victor, visited his old haunts in Denver for a few days in August.

Dr. N. P. Dandridge, one of Cincinnati's best known surgeons, spent his summer vacation in Colorado.

Dr. I. B. Perkins, with his family, are preparing for a journey to New York, Philadelphia and other eastern cities, early in October.

Dr. J. K. Rubert, of Buffalo, New York, is a recent acquisition to the Colorado profession, and we are pleased to welcome him to our ranks.

Dr. Will F. Hassenplug has been out of the city for several days "vacationing" in the mountains in search of bear, deer, gold or "any old thing" he can find.

Dr. H. W. McLauthlin shook the dust off his feet on Denver about the middle of August and sought the culture-laden atmosphere of Boston and vicinity, for a short vacation.

Dr. Arthur Beavis, after a sojourn in New Mexico and other

southern climes, is again back in Denver, picking up the threads of his practice, where he dropped them for his vacation.

Dr. Geo. F. Roehrig, resident surgeon of the Burlington R. R. in Denver, has laid aside his surgical case and taken up his hunting outfit for a few days' recreation in the mountains near Cripple Creek.

During the month we have received reprints from Dr. Edward Jackson, of Philadelphia, Dr. John Punton, of Kansas City, Mo., Dr. William Cheatham, of Louisville, Ky., and Dr. Robert Levy, Dr. J. N. Hall, and Dr. Hyrup-Pedersen, of Denver. We acknowledge indebtedness.

This month the JOURNAL chronicles the wedding of Dr. J. M. Blaine and Mrs. Beatrice Janet Moore, which took place September 2. As Dr. Blaine has been one of our "stand-by" friends we are more than pleased to offer congratulations for the happy future which we are so sure is to be his.

The rank and file of the Denver Physicians has been broken into by the departure of Dr. H. H. Bucknum, for Jackson, Michigan, where he may locate permanently. Dr. Bucknum has been in active practice in Denver for nearly a decade, as well as being a faithful member of the various medical societies of the city and state, and it is with sincere regrets that we note his departure.

The Gross Medical College opens September 12, and the Denver Medical College October 5, each unusually well equipped for an excellent year's work and the profession of Colorado may justly expect to be proud of the the high grade work that will be done by these two schools in the future. Both schools have well filled enrollment lists and the high standing of the teachers connected with both schools should do much toward the elevation of the standard of medical graduates of our state.

The American Pediatric Society is making a collective investigation of infantile scurvy as occurring in North America. They request physicians to co-operate with them in this investigation by sending them reports of such cases that come under their care. Whether such a report has been or will be published in the medical press will not interfere with its appearing as statistics in the investigations of the society. Blanks containing questions to be filled out are furnished on application, and those who report cases will be remembered with a final printed report of the work done. J. P. Crozer Griffith, of Philadelphia, is chairman of the committee.

From Our Exchanges.

Diabetes seems to be on the increase among locomotive engineers and a marked per cent. of mortality has been noted.

Sulphonal in fifteen to thirty grain doses is recommended in the night-sweating of phthisis.

Jones, of Edinburgh, gives belladonna internally for several weeks to a sterile woman. He says its use "is so frequently followed by pregnancy as to preclude considering the occurrence as a mere coincidence."

The following is taken from the correspondent column of the *Boston Traveler* of a recent issue and certainly shows the opinion of one who does not hold physicians in high esteem. His physician probably charged him a fair fee :

"Boston, June 24.—Speaking of our cultivated physicians, they are a deplorable, ignorant set. They have a tendency to greed, and commit crime to gain. Morphine dispensers (sic). Could society read the marks set by Providence upon them, people would turn from them. They are combative, cautious and insensible to justice; their treatment of patients deplorable. They are lawless and savage and illiterate. They present a scene of moral and intellectual desolation. Their progress is limited. I do not exaggerate when I say that they remain up to the present time in barbarity. They are unmitigated asses, making no progress; forever using someone else's brains. They make no progress towards civilization; they remain stationary in a state of rude barbarism. Years pass, they make no advancement only what they steal. If their skulls were put into the hands of a phrenologist they would be told to chop wood instead of human beings. They lay (sic) in waiting to rush upon their prey; they kill, and reckon it as an honorable death. They like to inflict pain and massacre the ill. The American savage is far superior; they are neither civilized nor Christianized. The most dreadful tortures should, and no doubt do, await them. I make it a virtue to judge charitably. Surely the people need protection against these rascals.

E. BUNNELL,
1½ Lawrence St.

Doctor—If you must know, ma'am, your husband won't live twenty-four hours longer. "Goodness, gracious!" ejaculated the broken-hearted but economical woman, "and here you've gone and prescribed medicine enough for five days."—*Ex.*

"My father is a great believer in bicycling." "Is he a dealer?" "No. Doctor."

Edison, when asked for the secret of success in business, replied: "Don't Look at the clock."

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Editorial.

National Statuary Hall.

In 1859 Congress began to occupy the two magnificent extensions to the capitol which had been built for it. The two old halls in which Americans orators as Webster, Clay, John Quincy Adams and Calhoun had clothed ephemeral politics in eternal literature became devoted to other than legislative uses. The old senate chamber is the present home of the Supreme Court.

A few years after the removal of the representatives, Mr. Morrill, of Vermont, proposed that the old Hall of Representatives be set apart as a National Statuary Hall, "to which each state might send the effigies of two of her favorite sons to be placed permanently here."

Any student of American history can guess the names of many of those whose work and worth are here commemorated in effigies of enduring marble. For the most part those who have been chosen as the favorite sons of the several states are soldiers and statesmen. It is plain to him who enters Statuary Hall that those who espouse some economic principle either with speech, pen or sword find the greatest place in the affection of their fellowmen and are the object of the most lasting fame. Freedom like hope "springs eternal in the human breast."

"But, what is freedom?" I asked as I stood at the foot of the

statue of him who broke the negroe's bonds. "It is the security of each person in the undivided product of his own labor." The more I examined this simple answer the more I became impressed with its truth and scope. It means no hungry children, no tattered clothes, no cold hearths, no imperious master, no very rich to frown, no very poor to fawn. Certainly no slave was ever in bondage except that the master might appropriate a share of the product of his labor.

But why are those men alone who have at times advanced a step or two toward this absolute goal represented among the nations great? Is there no blessing which an honest wage will not secure; no ill but those which it wards off? There is still another freedom or another phase of the same. It is the exemption from disease. The effect of the presence or absence of either of these conditions is very nearly the same. Still the friends of the one we celebrate in song, story and marble effigie, but for the friends of the other "here is rosemary. That's for remembrance." Withering rosemary!

Surely in our resourceful land contagion destroys more than cold or hunger, and disease causes as much distress as a divided wage. Not a soldier of that army which is constantly waging a war of increasing success against disease is represented in Statuary Hall. In the presence of the champions of that other freedom we forget the master hand with which our shores are kept free from plagues which are more formidable enemies than invading armies a million strong. We may look there in vain for the statue of one of the fathers of American medicine or surgery. We do not see Sims, nor Rush, nor Gross, nor McDowell, nor Morton, whose discovery of the anaesthetic properties of sulphuric ether has relieved mankind of more pain than staying the slave-holders hand.

Whose privilege shall it be to assume the sacred duty of placing a fit representative of our profession in this most fitting place? Opposite the west front of the capitol is a heroic statue of John Marshall erected by the Bar of the United States. The American Medical Association should profit by this example. Certainly a representative duty belongs to a representative body. C. S. ELDER.

† † †

The Teachings of John Armstrong.

In London in the early part of this century there lived, and practiced and taught, John Armstrong, doctor of medicine, whose lectures were re-published in book form in the year 1838. In addition to the ordinary beliefs of his time this little book reflects the

personality of its author to such an extent that its reading can hardly be accomplished without pleasure and profit.

Dr. Armstrong's opinions of his forbears are expressed in language at once forceful and readable. "Sydenham," he tells us, "was a man of genius, for he detected the fallacy and danger of the hot regimen and attempted to introduce the cooling one in febrile affections. Indeed, advancing into another age, he left his contemporaries far behind him, who endeavored to destroy his reputation by slanderous falsehoods. But secondary intellects miscalculate their power, when they suppose they can destroy the reputation of a genius, which revives even from the tomb, and again breathing and informing, it has an immortality in the respect and admiration of present and succeeding generations. Nay, the very college which is recorded to have been among his opponents, has bent before his shrine, as if in atonement for those prejudices and passions which formerly shrouded the splendour of his name."

From this clear cut picture of Sydenham, Armstrong turns to the consideration of Cullen and rends him to pieces. Of him he says that "notwithstanding all the panegyric that has been bestowed upon his name he introduced nothing original, for his system is a mere meta-physical 'thing of shreds and patches.' Cullen was not a man of genius though extremely plausible withal. Genius never is content with the mere productions of other men, but produces something of its own observation, so as to create, as if by a spell, what is new and useful."

Armstrong in one of his lectures enumerates in terse and vigorous language four reasons "why physic made so little progress in ancient times," and many who read them will agree that they are fairly applicable to the present as well as the past times:

"1st.—The defect of elementary information and especially in anatomy and physiology, through the horror that existed as to human dissections, so that men were not only ignorant of the healthy structures and functions, but knew nothing of those organic effects on which symptoms depend."

Not a few of us moderns contend that at the end of the nineteenth century defective instruction in practical anatomy and pathology is still one of the radical defects of many of the institutions that profess to teach the science of medicine.

"2nd.—The existence of false philosophy which is generally the offspring of presumption. Vain men form imaginary laws in the closet and attempt to bend nature to them, but while these have been perpetually fluctuating, nature has remained eternally the same, and her laws can only be deduced from an accurate examina-

tion of the phenomena as they actually exist. Fatalism was very prevalent in the ancient world, and must have been unfavorable to observation, as we now perceive it in modern Turkey."

We of even more modern times do not need to go to Turkey to find systems of belief that are originated in hare-brained skulls and to which men afterward attempt to "bend nature." Homeopathy continues to exist and to grow wealthy upon the spoils of ignorance. Osteopathy and all kindred schemes of villainy can find legislatures and courts venal enough to attempt to legalize their practice.

"3rd.—The cunning of the faculty, who so studiously concealed their ignorance by the affectation of knowledge. The ancient world was composed of two principal parties, knaves and fools; and the knaves contrived to keep all the power in their possession by making philosophy a mystery and by keeping the people in a state of profound ignorance."

The world has not changed much in this regard either. The two great classes still exist and the one furnishes continuous food for the other. It may be said however, for "the faculty," by which I presume the regular profession is meant, that as a rule its practice to-day is to spread knowledge and to educate the people. In this regard the medical profession leads the world; it sacrifices itself to the good of the whole people.

"4th.—The gross ignorance of the public. Ignorance is the parent of credulity, and when an enlarged and liberal spirit does not exist in the public mind, then we find craft and knavery prevail. This is an age however in which it would be vain to prop up false principles and practices by an affected reverence for what is called the wisdom of antiquity, which was distinguished by little else than weakness of intellect in the inductive sciences and which young in knowledge compared with the present (which is) rich in accumulated fact and inferences of numerous minds successively enlightening each other."

From all of which it may be seen that the people and the issues of the early part of this century were essentially what they are to-day; that human nature has not changed much, although knowledge has continued to increase; and that those straightforward minds who rise in revolt against the tyranny of ignorance or the presumptions of false teachers had creditable precedents in the action, and words bravely spoken, of such master minds as John Armstrong, doctor of physic in the ancient city of London.

W. P. M.

Indifference of Patients.

In the daily drudge of the over worked Doctor, there is seen so much indifference on the part of patients and their relatives and friends that it is not to be wondered at, if he gets a shade careless and indifferent. The wonder would be if he did not. When he finds in his work day by day that his advice is disregarded, that his instructions are not carried out, that his medicines are not administered and that his patient as well as relatives, are indifferent to the final result, it is enough to drive a sensitive man entirely out of the practice of medicine. It has always been a surprise to us that as many men practice medicine as do. Probably if a man could change his profession like he changes his coat, we would find but few men to care for the sick and ailing.

There has recently occurred to us three examples of such dreadful indifference on the part of patients and their friends that a few more would be sufficient to drive us to seek fame and fortune in other fields. A woman consulted us early this month for a pulmonary haemorrhage. She had been under our care for pulmonary tuberculosis and had seen one of her friends die of a haemorrhage. She was of moderate intelligence and had fairly well followed our instructions up to this time. She came in for an office consultation bringing with her a pint cup which was three-fourths full of blood, which she had coughed up on the street. She was told to return home on the cable car at once, go to bed immediately and to take some medicine which was telephoned for. She was told she might spit up more blood and that she must be very careful as her chest was full of bubbling rales. This was at four o'clock; at seven the same woman was seen carrying a large basket of vegetables, running ten feet to catch the car which she should have taken three hours before. That night she had another very severe haemorrhage and on being called, we refused to go. She got another physician and after a week or two in bed, made a recovery.

Following this we were called to see a child with catarrhal pneumonia in a family of young children. The room was ordered to be kept warm, a jacket to be applied and stimulants and some other combination to be administered. As the child was quite ill and had been so for several days the mother was told the seriousness of the case and that the child would have to receive the best of care if it recovered. For twenty-four hours the treatment was carried on faithfully and well. The next visit was made on the second day at an unusual hour, and lo and behold the mother had gone up town to attend a "fire sale" leaving a twelve year old daughter to attend to the baby. She had been away for two and a

half hours at the time of our visit. We stormed and we swore and at present that baby is getting the attention that it demands.

The third case is equally as bad as the others. A little child with both ears running profusely came under our care, and syringing with subsequent insufflation of boracic acid was ordered every three hours. The baby was brought back several times and "no improvement" was the report each time. Being in the immediate neighborhood of their residence several days later a visit was made on the child at 11:45 a. m. Both ears were found full of pus and the mother confessed that the child's ears had received no attention since 4 p. m., of the previous day.

Again we say that a physician has a right to get careless and indifferent. If people don't care why should the Doctor? Only personal ambition and the desire to give return for money to be received is in such cases the main spring of action. It is lucky for such indifference if the attending physician has ambition. Many patients are not at all pleasing and with a tired Doctor and an indifferent patient, Providence must rule.

† † †

Our September Number.

A careful review of this number of our JOURNAL will show the high character of this medical publication. Dr. Freeman describes in detail two interesting surgical cases which can be read with profit by every subscriber. Dr. Hopkins' article on "Nervous Diseases Simulating Peritonitis," is short but very concise and will prove of value to every practitioner. Of Dr. Campbell's article on "Colorado's Patients," too much cannot be said. It presents an array of very valuable statistics. Dr. Pedersen writes on a subject of great interest to every practitioner and his paper will be read with profit.

Of our *melange* we can only say that it is carefully prepared and all original, all fresh and all of interest to western practitioners.

† † †

An Examination for Medical Professors.

Dr. Brinkerhoff in the *Chicago Tribune* pleads for a rigid examination for those who desire to become professors in Medical Colleges. He protests against the passage of a medical law in Illinois requiring graduates to take an examination before the State Medical Board. Among many good things he says:

"He of the medical profession who has to-day a small sum of ready money can exchange it tomorrow for stock in a medical college, and the next day can appear before the class in the robes of professorship. No qualifications are exacted of the aspirant for the professional toga. No legislation is demanded to make him

competent, but it is proposed to require each graduate who has attended lectures under this professor to pass a rigid examination by a medical examining board of nine members. This is not to be wondered at when the professor who teaches is not required to show even the credentials that a teacher in our public schools must possess. The law, if passed, will stand as a stigma upon what ought to be our most intellectual schools. If we have legislation for higher medical education it should be so directed as to apply to the teachers of medicine, for they are the educators. Those who are or who desire to become professors should be required to pass a rigid medical examination. Their qualifications to teach should be no less thoroughly tested than are the qualifications of the teachers in our public schools. After examination the aspirant for professional honors should be entitled to a teacher's certificate entitling him to teach for a term of years, as determined by the result of his examinations. Establish the medical professorships upon this basis of "higher medical education," then let the diplomas they grant be prima facie evidence of competency on the part of the graduate, and there will be no necessity for an examining board."

† † †

Hospital Rooms in New Houses.

Our attention has recently been attracted to this subject by an editorial appearing in one of our leading medical journals. It recommends that persons building new houses should apportion a part of the new house to the sole purpose of a hospital ward, for cases of sickness occurring in the household. Such a room or rooms should be somewhat isolated, easy of access however, carefully ventilated, sunshiny, of a hard finished interior, with separate bath and closet and fitted up with some of the necessary furnishings of a sick room. The recommendation is of great value and progressive architects will no doubt give the matter careful consideration. A number of Denver physicians are building lovely homes and this will appeal to them.

† † †

Study of the American Medicinal Flora.

The Smithsonian Institution has undertaken to bring together all possible material bearing on the medicinal uses of plants in the United States. It is not the important or standard drugs alone concerning which information is sought, but the institution desires to compile a complete list of the plants which have been used medicinally, however trivial such use may be. Poisonous plants of all kinds come within the scope of the inquiry, whether producing dangerous symptoms in man, or simply skin inflammation, or as

"loco-weeds," deleterious to horses, cattle and sheep. The committee has furnished this journal careful directions for the collection of specimens, and any of our readers who wish to aid this investigation can obtain these from us on request.

METHOD OF CLINICAL INSTRUCTION IN MEDICAL COLLEGES.

In the reorganization of the Denver Medical College the work in the Dispensary has been made to take a prominent place. A large part of the College Building has been entirely remodelled for the sole use of the dispensary and every department of medicine has its separate clinical room, each well equipped.

The entire clinic is under the direction of a graduate in medicine who carefully sees to it that applicants for treatment are deserving of charitable aid. This physician assigns patients to their respective classes. We understand that it is the firm determination of the Dispensary Committee of this school to strictly limit the work in this Dispensary to the poor who are unable to pay a physician; such dispensary work is legitimate and necessary. Those who are unable to pay for medical attendance should have it extended to them without payment, but a careful and rigid supervision should be exercised; this supervision, will be very thoroughly carried out here.

Each Dispensary Class is primarily under the direction of one of the professors occupying the respective chair in the college, he being assisted in such manner as seems suitable to him. The following schedule which has been handed us exhibits the assignment of the various classes for the ensuing year:

1. GENERAL MEDICINE:

January, February, July and August. Prof. Bonney and Dr. Delehanty.
March, April, September and October. Prof. Axtell and Dr. Stover.
May, June, November and December. Prof. Whitney and Dr. Hickey.

2. SURGERY.

January to June. Prof. Rogers and Drs. Johnson and Rucker.
July to December. Prof. Powers and Drs. Walker and Childs.

3. GYNAECOLOGY.

January to June. Prof. Wetherill and Dr. Bell.
July to December. Prof. Jayne and Dr. Peavey.

4. DISEASES OF THE NERVOUS SYSTEM.

Entire Year. Prof. Pershing and Associate Prof. Hopkins.

5. DISEASES OF THE EYE AND EAR.

January to June. Prof. Rivers. (Assistant to be appointed.)
July to December. Prof. Foster and Dr. Beatty.

6. DISEASES OF THE NOSE AND THROAT.

Entire Year. Prof. Howland and Dr. Stiver.

7. ORTHOPEDICS.

Entire Year. Prof. Packard and Dr. Root.

In each department the Professor primarily in charge assumes entire responsibility for all cases seen and all work done. The assistant physicians and surgeons attend to all details of the work. Classes in each branch are to be held daily, and the Dispensary will be open from 11 o'clock until 12 in the forenoon with the exception of Sundays and legal holidays. The Dispensary patients will be utilized for the instruction of the students in the Medical School, but due care will be observed that no patient be unfavorably affected by such a demonstration.

The physicians of Denver and visiting physicians from other parts of the state ought to be sufficiently interested in the medical college work in Denver that they visit the institutions of learning here. We feel quite sure that they would be surprised at the complete dispensary equipment of the schools here. C. A. P.

**MONTHLY BULLETIN OF THE COLORADO MEDICAL LIBRARY
ASSOCIATION.**

T. H. HAWKINS, M. D., President.

LAURA LIEBHARDT, M. D., Treasurer.

HENRY SEWALL, M. D., Secretary.

From all the corners of this wide land people come to admire the grandeur of the Rocky Mountains. I know a good many folks in Denver who never lift their heads to look upon the mountain tops. They are yearning to go to Switzerland to see the Alps. What is true with respect to nature is also applicable to many other things.

How many medical libraries are there in the United States? Ten in all. Not numerous, to be sure, and considering the area of the United States they must be very far apart. Now, one of these ten libraries is situated right here in the heart of Denver. Have all the physicians in Denver seen it? Do they know of its existence? Surely had they visited Philadelphia or New York they would not have failed to go and see the medical libraries of these cities, and would for fully six months afterward tell everybody about these "grand institutions." They, too, don't see the Rockies, they yearn for the Alps.

Now, my brethren in Esculapius, awake, rub your eyes, and just try not only to look, but to see and you will behold before your open eyes one of the greatest medical institutions in Denver in its process of growth. Turn around the corner of 19th and California Streets, enter a big building where a sign of "Public Library, open from 9 a. m. to 9 p. m. the year round," will greet your optics. Go

in—don't hesitate, go up a flight of stairs leading to the medical library. Hold your eyes wide open, and I can assure you that what you will see there will cause your mouth to open still more wider, and you will regret that you have not been there before. I am certain that any one who will take the trouble to visit the library will feel proud of this great acquisition to the city of Denver.

The library like many other good things in this world is not begotten from naught. It took a large amount of labor and money to build up what we have. It requires now still more money and labor to keep it agoing right.

I will tell you some other time who were those who founded the library and kept it up by their energy and purse. We will leave historical facts for another occasion and now we will furnish "fresh news":

Three new members have joined the association—Drs. Zederbaum and Gallaher, of Denver and Hawes, of Greeley.

Hurrah! We have now a complete set of the *Index Medicus*. A new accession in the form of the celebrated work, *Archive der Hygiene* in 6 volumes.

Dr. Mitchell, of the County Hospital, has volunteered her services in making up an accession list of all the journals in the library. She works hard and steady and will be soon through.

Dr. Zederbaum kindly consented to do some volunteer work in the library whenever called upon. He won't have to wait long for orders from Dr. Sewall.

Through the indefatigable labors of Dr. Sewall, the library has received from the Surgeon-General's library at Washington, 400 valuable bound volumes, and 400 volumes ready for the binder.

While writing the last words I blushed. The 400 volumes are ready for the binder but cannot be bound. Don't think it is because there are no book binders in town. O, no! the book binders made a fine display on Labor Day. There is no money in the treasury to pay for the binding.

Now, one membership in the C. M. L. A. binds ten volumes. Who wishes to clothe ten naked children, children of genius? Send in your name to Dr. Liebhardt, and the measure will be taken at once.

Mr. Dana, the genial librarian of the Public Library, has kindly appointed a special man to do some very important work in the medical department.

I expect in my next bulletin to give you a list of at least twenty-five names of new members.

C. D. SPIVAK.

September, 1897.

The Denver and Arapahoe Medical Society.

The fall meetings of this Society will begin Tuesday, October 11th. President Jayne and the Executive Committee have been giving the meetings careful consideration, and a fine series of programs are promised. Dr. Spivak, the hard working Secretary, has planned that the Society shall have some publication of their transactions for the year 1897. He is on the eve of issuing the following letter to each member :

"DENVER, COLO., Sept. 12, 1897.

"DEAR DOCTOR :—The papers read before the Denver and Arapahoe Medical Society are of such a high standard that their preservation in some form is worthy of consideration. In order to pave the way for the future publication of the proceedings, I have decided to collect the papers read before the Society since January, 1897, and those to be read in the future, and together with the discussions which have appeared in the COLORADO MEDICAL JOURNAL, will form the first collected proceedings of The Denver and Arapahoe Medical Society.

"Please send me your paper, either in reprint or copy."

Through the medium of this Journal he appeals to the following who contributed papers during the first half of the year: Dr. Wetherill, "Surgical Shock in High Altitudes"; Dr. Hershey, "A Contribution to the Pathology, Diagnosis and Treatment of Gastric Disorders"; Dr. Hall, "Report of Cases of Phthisis Originating in Colorado"; Dr. Rover, "A Case Illustrating the Value of Symphysiotomy When a Tumor Obstructs the Parturient Canal"; Dr. Burns, "Modus Operandi of Symphysiotomy"; Dr. Van Zant, "Two Recent Tests for Typhoid"; Dr. Mitchell, "Bacteriological Diagnosis of Typhoid Fever"; Dr. Spivak, "Chelidonium Majus in the Treatment of Inoperable Cancerous Growths"; Drs. Eskridge, Pershing, Freeman and Rogers, "Symposium on Cerebral Surgery"; Dr. Hall, "A Case of Double Pulmonic Murmur with Diastolic Thrill"; Dr. Hershey, "The Use of Stimulants in Acute Diseases"; Dr. Godfrey, "Tumor of the Neck and Osteomyelitis"; Dr. Waxham, "The Prophylactic Treatment of Pulmonary Tuberculosis"; Dr. Hill, "Urea"; Dr. Love, "Lacerations of the Uterine Neck"; Dr. Jackson, "Co-operation and Union Between Medical Colleges"; Dr. Edson, "The Abuse of Medical Charity"; Dr. Sewall, "A Case of Remarkable Vital Resistance"; Dr. Hall, "Detection of Systolic Murmur in Foetal Heart in Utero"; Dr. Black, "Glaucoma following a Needling Operation"; Dr. Leonard Freeman, "Report of Surgical Cases"; Dr. Blaine, "Cases of Gleet."

Dr. Spivak's idea will meet with the approval of the Society we feel sure. This Journal will in the future as in the past present full reports of this Society's meetings.

Book Reviews.

LIPPINCOTT'S MEDICAL DICTIONARY.—A Complete Vocabulary of the terms used in the Medicine and the Allied Sciences, with their Pronunciation, Etymology and Signification. By R. W. Greene with the Editorial Collaboration of John Arbhurst, Jr., George A. Piersol and Joseph P. Remington. The J. B. Lippincott Company, Philadelphia, Pa. 1154 pages. Price \$—.

When this book was first announced, we were rather prejudiced against it because it was prepared on the basis of Thomas's Medical Dictionary. When Dr. Thomas issued his dictionary we were among the early buyers and his book of 1886 is still on our shelves. It was never a satisfactory book. It had almost no system of pronunciation, although issued as a Pronouncing Dictionary, the definitions were not concise and clear cut and fully 500 words that we wanted light about could not be found in it. So poor a help was it that during the past five years it has remained almost untouched upon our shelves. In preparing this review both of these books have been carefully contrasted. The dust has been blown off of the old book and the new book arranged by its side. The contrast is a marked one. The new book is larger, of better style, with 310 more pages and with an absolute new text throughout. It is a new book and a complete book and one that can be recommended. Of all sad things in a physician's library a poor dictionary is one of the saddest. In this new book great care is evident in every line. Master minds have had it in charge.

With every dictionary some faults can be found. New words are being coined, new facts discovered so often that a dictionary cannot keep pace. We have taken up one of our exchanges—*The American Medico Surgical Bulletin*, and we have put this new dictionary to a practical test on words found therein. We find thyreoidin defined as thyroid extract. We refer to extract and we see nothing of its manufacture. Under "animal" we see nothing of animal extracts. Antitoxin is defined as "a substance developed in the body which counteracts poisons which are generated or implanted there." Under diphtheria no reference is made to diphtheria antitoxin.

Widal's test and its modifications are not defined. But it gives on the whole a good service and a purchaser will be pleased with this companion.

P. Blakiston, Son & Co., announce the publication in October, of a new work on "Diseases of the Stomach" by Dr. John C. Hemmeter of Baltimore. The work promises to be of exceptional value, in as much as each phase of the subject is taken up in detail, the special pathology, diagnosis and treatment, the anatomy, analysis of stomach contents, dietetics, surgery of the stomach. A full review of the work will appear in the JOURNAL after the publication of the work.

We have a pleasant letter from the firm publishing this book speaking highly of the character of our book review department.

THE COLORADO MEDICAL JOURNAL.

A Scientific Medical Journal, Published in the Interest of the Profession of the Great West.

SUCCESSOR TO THE
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No. 10

Original Communications.

TREATMENT OF POTT'S DISEASE OF THE SPINE.

By G. B. PACKARD, M. D.,
Denver, Colo.

Professor of Orthopedic Surgery, Medical Department University of Denver.

The object of local treatment in Pott's disease is to stop all motion at the point of disease and to diminish, as much as possible, the inter-articular pressure. This being accomplished, the traumatism produced by motion and pressure, which is induced by locomotion and the erect position, is prevented. Therefore any appliance that fulfills these indications places the diseased vertebrae under favorable conditions for recovery. Although the object of this paper is to advocate the use of an antero posterior support, which embodies the principle of leverage, I do not in any way desire to reflect upon the use of the plaster jacket, for the latter has filled a long-felt want in cases where no other method of treatment could be made available. It also has some advantages in the lumbar region and where lateral deviation of the spine is a prominent feature. Under the most favorable conditions, tubercular disease of the vertebrae, whatever the location, must be under treatment for a long time. It is best, therefore, to use that method of treatment, which is most comfortable for the patient, and the most convenient for the surgeon providing it is the most efficient in fulfilling the indications of treatment. Such I believe is the leverage plan of treatment, which was introduced many years ago, but now is somewhat overlooked and misunderstood, by many of the profession. It is, however, in quite general use by many of the orthopedic surgeons and it is worthy of note, that wherever a surgeon has had extensive,

practical experience with this principle of treatment, he rarely abandons it for any other method. In fact I think the action of the plaster jacket is similar to it when well applied with spinal column in best possible position. When the cast loosens a little this effect is lost, and it then becomes inoperative. What I mean by the leverage principle is this: The fulcrum is at the point of disease, where the spine bends and gives way and the power is so applied, that the action is directly backward at the hips and shoulders and directly forward at the diseased part; in other words the brace acts as a double lever with a common fulcrum at the curvature. I don't mean by this that sufficient force should be used to try to overcome the projection, but enough should be exerted against the transverse processes of the vertebrae—not to wholly overcome—but to diminish, as much as possible, the inter-vertebral pressure, at the point of disease, to partially transfer pressure to the healthy processes and to immobilize the spine in the corrected position. Dr. Judson has formulated the following rule in regard to the amount of pressure that can be used with advantage. "The apparatus may be considered as having reached the limit of its efficiency if it makes the greatest possible pressure on the projection, compatible with comfort and integrity of the skin." The amount of vertebral separation or rather diminution of inter-vertebral pressure will vary, from anatomical conditions according to the region of the spine. The antero posterior mobility of the dorsal region is so slight that it would be difficult to relieve as much intervertebral pressure by pressing upon the transverse processes, as in other locations, but its additional action as a posterior supporting splint would make it a very efficient brace in this region. For the purpose of illustrating the action of an antero-posterior splint, I have here a modified Taylor brace strapped to a spinal column. Let us suppose the disease is located at the middle portion of the spine, and as usual in the anterior part of the body. The fulcrum then would be at this point. The part of the uprights above this point would be one lever and the part below the fulcrum would be the other lever, pressure being forward at the fulcrum and backward above and below. As these uprights rest against the transverse processes, it is very evident that the greater the amount of pressure brought to bear against them the less the intervertebral pressure in front. Of course the tendency would be to pry apart the anterior portion of the vertebra, in proportion to the antero posterior mobility but as I remarked before it would only relieve a certain amount of pressure. Even were it possible to produce distraction, it would not be advisable as it would interfere with the reparative process during consolidation. We

can also see how thoroughly it immobilizes the spine—it being accurately adjusted to the transverse processes, the same as we would adjust a splint to a broken bone, it prevents both lateral and antero posterior motion. There have been various modifications of the original antero posterior splint or what is known as the Taylor brace, but one perhaps, something after this pattern is as satisfactory as any. It consists of two up-rights of annealed steel which exactly correspond to the shape of the spine. These uprights are attached to a pelvic band below and also joined above. There is usually a padded plate attached at the fulcrum or point of disease. Shoulder pieces extending over the shoulders from the upper ends of the up-rights, prevent the brace from moving laterally and give a better point of attachment, for the straps that come around the shoulders and produce backward pressure. It is held firmly in place by straps attached to an apron, which extends in front over the abdomen and thorax. The apron extends to the pubes and presses to the abdomen upward instead of downward as is the case with many appliances. One very important feature about this brace is to have the uprights made of steel of sufficient strength to stop motion at the point of disease, and at the same time tempered so as to permit of bending, in order that the shape may always correspond to the shape of the spine. In order to make this brace operative in the first two or three dorsal vertebrae, it will sometimes be found necessary to lengthen our lever by adding the head support to the uprights already described. The head support consists of an ovoid steel ring, made to open on the side, and attached to the uprights. It exerts pressure upon the occiput, by two padded pieces of steel, bent to fit its curved surface, and it has a hard rubber cup, in front, to receive and support the chin. In the cervical region the difficulties are not so great, the chief trouble being the motion and weight of the head. This is admirably obviated by the use of the same head rest, added to the uprights, which makes a firmer and much more easily managed support than the jury mast surmounting the plaster cast, as the latter must constantly yield, from the weight of the head. When there is considerable lateral deviation, we can add lateral pressure, by attaching a simple form of corset to the uprights, extending nearly around the body, in front.

Various additions and modifications may be made according to the indications of the case, without interfering with the principle of the brace. I have substantially confined this paper to the description of the mechanical treatment of Pott's disease, by the antero posterior support, as I believe it meets more fully the indications of treatment in the majority of cases, that it is more comfortable

and satisfactory to the patient, and more convenient for the surgeon. However, as I remarked before, I would not wholly dispense with the plaster jacket, as it has advantages, in certain conditions; nor would I reflect upon the recumbent method of treatment, which is advocated by many.

During the acute stage and when complications such as paralysis, psoas contraction and abscess are impending, recumbency should be strongly advised, but the use of the apparatus should be continued at the same time.

CHLOROFORM IN NORMAL LABOR.

By KATE REYNOLDS LOBINGIER, A. B., M. D.,
Denver, Colo.

When ether was discovered in America, Sir James Simpson, the famous obstetrician of Edinburgh, at once began to use the anaesthetic in his labor cases. He was so delighted to find an agent that could relieve the pains of childbirth, that he had used ether in fifty obstetrical cases, before anyone in America had so used it. To find some pain-stilling remedy had been the ambition of Simpson's early manhood. When experience proved that ether was not an ideal anaesthetic for use in normal labor, he felt it might possible be able to find some other agent that would be more powerful and less disagreeable.

Through the long summer months of 1847, Simpson dreamed and experimented. Hoping to receive some suggestion of value, he haunted laboratories, interviewed chemists and inhaled new liquids. He believed the only way to judge of a new substance was to take it himself, and he was absolutely fearless in making experiments. At one time, after inhaling an unknown liquid, he was unconscious for two hours, and on several other occasions, in his eagerness to find a new anaesthetic, he very nearly sacrificed his own life.

The whole summer was spent in fruitless study, but the dauntless Simpson was not discouraged. One evening early in November, he came home tired out with the labors of the day. As a recreation, he thought he would experiment with a new substance recently given him by a chemist. There was only half an ounce of the drug, but he invited his two assistants to sit down at the dining room table with him, and then he poured the liquid into three open vessels and they all commenced to inhale freely. They be-

gan to praise the new substance, but their eulogies were cut short, for each man quickly disappeared under the table. When Simpson awoke, his first thought was, that here was something stronger and better than ether.

The liquid that produced anaesthesia so quickly was chloroform. Four days after this experiment, the vapor was inhaled by a patient in labor and three days later the drug was publicly used in three surgical cases.

Simpson's idea in searching for a new anaesthetic was to find an agent suited for obstetric use, but when he came to advocate the use of chloroform in labor, a storm of indignation swept over the civilized world. Simpson was a true prophet when he held up a small bottle of the drug, and said to his wife: "See, this will turn the world upside down." The medical profession has never witnessed a fight so bitter as this one about anaesthesia in normal labor. Many of the opposing arguments were founded on religion and sentiment, so the discussion was removed from the neutral field of science. Learned men argued that it was unscriptural to ease the pain of labor. They said that woman had been cursed and told she must bring forth her children in sorrow, and for her to escape the consequences of the curse by taking chloroform was cowardly, and even criminal.

These gentlemen were so eloquent they failed to be logical. They seemed to forget that man also was cursed, and told that he must earn his living by the sweat of his brow, and so in accordance with their theory it must be unscriptural for a man to live by his wits, instead of his muscle.

Simpson was a forceful writer, and he did valiant service for the cause of obstetric anaesthesia, but his soul was greatly tried by the illogical and petty arguments he was obliged to answer. Once, when he heard a certain doctor was going to address a medical society on the immorality of using chloroform in obstetrics, he said with more emphasis than elegance, "I feel an itching to run up and pound that man."

Many of the arguments which Simpson had to meet were founded on sentiment; some writers claimed that unless a mother realized to the full her suffering, and drank her cup of bitterness to its very dregs, she would not love her child. They argued that the mother's mind should be clear, so she could revel in the approaching joys of maternity. That sounds poetical and fine, but the fact is, a woman in the second stage of labor has no power of imagination and few patients connect the pains with the birth of the child.

It is certainly fallacious to assume that women who have short and easy labors must, on that account, have less maternal love.

Another argument was this, that the pain attending labor is so trivial no relief is needed. It was stated that the lying-in chamber is often a scene of cheerfulness and even of gaiety. Such a statement proves that it must be easier to witness suffering than to endure it. To a woman in hard labor the interval between pains is momentary, while the pain itself seems endless.

The arguments against the use of chloroform often conflicted with each other. While some argued it was needless to relieve the trifling pain of childbirth, others claimed the suffering was acute, but relief was detrimental, for the more a woman suffered, the better off she was. While men argued thus, women kept silence, at least the mass of them did, but there was one woman who spoke for her sex in no uncertain way. This woman was Queen Victoria. Six years after chloroform was first used in obstetrics, while yet the discussion was heated and bitter, the Queen was delivered of her seventh child, and chloroform was administered by Snow. As an answer to argument, this royal example was worth many books of logic. The bitter opposition to obstetric anaesthesia has gradually died away, and to-day we may discuss the subject from a purely scientific standpoint. No medical man of the present time is willing to advocate the absurd theories that were gravely entertained fifty years ago, but the influence of that bitter controversy is still felt. Among the laity there lingers yet a superstitious feeling that any interference with the pains of labor is unholy and uncanny and must be followed by disaster. Such a feeling must have a reflex influence on the profession, for if anything untoward occurs when chloroform is given, the physician will be severely criticized.

The religious and sentimental objections to obstetric anaesthesia need no further mention, but there remain two questions that deserve consideration: Is the exhibition of the drug safe, and, if so, is its use expedient? During the past five years, there has been much controversy in regard to the physiological use of chloroform, but there are a few facts that are well established. It has been proved that this agent is a protoplasmic poison, and in concentrated form will check the activity of any cells with which it comes in contact. If the heart muscle is weakened by fatty degeneration, or other causes, a large dose of chloroform may so depress the working apparatus of the heart that further action is impossible. In a few labor cases, dangerous symptoms have been noted after a fresh supply of liquid has been poured upon the towel, and the patient had been breathing deeply. The activity of the respi-

ration is the gauge of the dose, and that is one reason why overdosing is not common in obstetrics. During a pain the patient holds her breath and in the interval the attendant withholds the drug. It has been argued that the help derived from chloroform is more imaginary than real, and it certainly is true, that during the acme of a pain the drug might as well be a mile away as under the sufferer's nose. Though she sees the inhaler, and longs for relief, not a single whiff of the blessed vapor can reach her. Her condition is like that of Tantalus, who stood bound in the midst of a swelling tide which rose to his chin and then receded, but never a drop could reach the lips of the thirsty captive. Obstetric anaesthesia is possible, because a contraction begins before the suffering comes, and in that short interval of time the vapor can be inhaled. The patient learns by experience how limited is the available time, and when she feels the premonition of a pain, she often urges her attendant to make haste.

The repeated interference with the respiration is a safeguard against overdosing, but, even in labor, chloroform is never safe in the hands of a careless person. To regulate the dose is necessary and this requires minute attention to detail. In some way, a thorough and equable admixture of air and vapor must be secured. Dr. Jewett says that, if a towel is used, it should be spread in one thickness over the head, and then should be lifted by the middle, so as to form a large air chamber about the face, and the liquid should be dropped on the outside, a drop or two with each breath. In this way each particle of air that passes through the porous towel becomes charged with vapor and an equable mixture is obtained. The ordinary inhaler, a wire frame covered with suitable material, acts on the same principle.

Chloroform in overwhelming doses may have a lethal effect upon the heart or on the centers in the medulla, but the fall of blood pressure caused by the drug may produce untoward symptoms. The heart, like the stomach, is a hollow, muscular organ which is stimulated to contract by distention. When blood pressure is lowered, and the capillary vessels are relaxed, the heart receives so little blood it cannot work to advantage. Inverting the patient causes blood from the veins to flow into the heart and this acts as a stimulant. Pressure on the abdominal vessels will often help a feebly acting heart to contract more forcibly. In surgical anaesthesia where the labor pains are greatly weakened, or abolished, the fall of pressure produced by chloroform may be a dangerous factor, but in obstetric anaesthesia the muscular effort of

each contraction tends to raise blood pressure and thus the influence of the drug is counteracted.

It is a disputed point whether chloroform predisposes to post-partum hemorrhage. The clinical evidence we have is not conclusive, but theory would seem to indicate that, if the pains are greatly weakened by anaesthesia, the relaxed condition of the uterus combined with the want of tonicity in the blood vessels, would favor hemorrhage.

Chloroform in surgery is regarded as a dangerous agent, but in obstetrics the percentage of fatalities is almost nil. The mental condition of the patient must have an influence. The woman in labor is not depressed by fear, she is not afraid of the chloroform; she begs for it and welcomes it. The records of military surgery indicate that it is comparatively safe to give chloroform to persons in great pain. Acute suffering is a cerebral excitant. Contractions of the uterus, even if not attended with severe pain, seem to have a reflex influence in stimulating the nervous centres.

Clinical evidence proves that, if the dose is carefully regulated and only obstetric anaesthesia is produced, it is generally safe to give chloroform in labor, but granting this, there is still the question of expediency to be considered. It is a well known fact that the intervals are lengthened and the pains are shortened by the use of any anaesthetic, and this effect will generally delay the labor. There is no real relief for the patient while the pressure of the head continues in the pelvic cavity. It may be the truest kindness to withhold the drug so the suffering may be relieved as soon as possible. But if the pains are active and come in quick succession, it is important to delay the labor and give time for relaxation. To prevent rupture of the perineum, chloroform is the most efficient agent that we have. As the labor nears completion, many authorities advise that the anaesthesia be pushed to the surgical extent, but if the perineum is soft and well distended, the writer thinks that chloroform should be used, merely to shorten each individual pain. Just at the last the contractions are so prolonged and powerful, there is danger the head may be born during the acme of a pain, and any careful attendant would be mortified by such an accident. If the patient is told to open her mouth and refrain from bearing down efforts, only a little chloroform will be necessary. The influence of the drug persists after inhalation ceases, for the residual air in the lungs is loaded with the vapor, and the blood continues to receive a supply, though none is inhaled. For this reason, it seems advisable to give only a moderate amount of chloroform during the last few pains of labor. We need a good con-

traction to expel the body of the child and good retraction afterwards to prevent hemorrhage.

Obstetric anaesthesia requires a large amount of judgment and of skill, for the task is a difficult and delicate one. To keep a patient on the verge of unconsciousness, is like trying to keep a boat at rest among the tumultuous rapids that are hastening toward a water fall. Eternal vigilance is the price of safety when two opposing forces must be counterbalanced. The use of chloroform in normal labor is often deemed inexpedient because an extra amount of fatigue is thus imposed upon the doctor. A competent anaesthetizer is a great help in any case of labor, and many patients would gladly pay an extra fee, if by that means their sufferings might be safely lessened.

The writer believes that as a rule chloroform should be given a trial in obstetric cases, and its use should be continued unless there is cessation of the pains, or some other contra indication.

In conclusion, we wish to pay a tribute of respect and admiration to Sir James Simpson. He was the first man to use ether in obstetrics; he discovered the anaesthetic effect of chloroform and defended its use in normal labor, and he was the first man to use chloral to assuage the pains of childbirth. During his long professional life of forty years, his chief thought was to find a weapon by which he might fight and conquer pain. When he chose a motto it was this, "*Victo Dolor*," pain conquered. It seems fitting that in this jubilee year of chloroform the services of Sir James Simpson to womankind should be spoken of with gratitude.

THE RADICAL CURE OF HERNIA, WITH REPORT OF A CASE.

By FRANK FINNEY, M. D.,
La Junta, Colo.

Surgeon in Charge La Junta Hospital.

As the title of this paper indicates, the subject will be handled with reference to the radical treatment of hernias alone, leaving out, as much as possible, consideration of the more familiar palliative methods of treatment.

Until recent years, the many methods devised for the radical cure of hernia, proved, in most cases, to be anything but radical. In Erichsen's Surgery, of as recent a date as 1881, under the head "Radical Cure of Hernia," I find these words:

"Various means have been devised in order to effect the radical cure of a reducible hernia. The only plan that is at the same

time *perfectly safe and permanently successful*, is the compression of a well made truss."

The above, coming from so eminent an authority, certainly indicates the prevalent surgical opinion of that day.

Among the earlier methods employed may be mentioned : First.—Injections of irritating substances about the rings and pillars. Second.—Irritation from pressure of plugs. Third.—Subcutaneous wiring and suture.

The changes rung on the above methods were various and ingenious in the extreme. To simply mention the methods with the statement that they very often proved ineffectual and occasionally fatal, is sufficient in this connection.

The history of the various early methods was thoroughly gone into by Dr. Grant in his excellent paper of last year read before this society. Coming down to 1882 we find Prof. S. D. Gross advocating as "the most rational radical treatment of hernia," the "direct method," consisting in cutting down upon the parts, freshening the edges of the opening of descent and approximating them with sutures. But in the same article Prof. Gross depreciates as unnecessarily severe and dangerous, the more thorough operations of Prof. Czerny, of Heidelberg, and other European surgeons in which the sac was exposed, tied off with catgut at the internal ring, and the stump pushed back into the abdominal cavity, after which the fundus of the sac was dissected out and removed, and the columns of the external ring united with sutures.

In reading the literature on this subject, one cannot help being impressed with the frequent allusions to the dangers of suppuration, erysipelas, etc., and the conclusion is forced upon even the most skeptical, that antisepsis and asepsis have played the most important role in perfecting the treatment as we find it to-day.

Very many cases of recent reducible hernia, especially in young subjects, can be permanently cured by the application of a properly fitted truss, the same to be worn from one to three years. When from any cause cure cannot be accomplished, the patient should have the benefit of a radical operation. The operations which are now being most extensively done, are the Bassini and the Halstead. Full descriptions of these operations are to be found in all of the recent works on surgery. It has not been my good fortune to witness the performance of the Halstead operation, but the results obtained are said to be extremely encouraging.

While in New York, a year ago last September, I saw the Bassini operation done a number of times by Prof. DeGarmo and Dr. Coley, and became convinced that it was the best operation for the

radical cure of hernia. I was impressed with the simplicity of the operation, and the minimum amount of danger attending its performance under proper aseptic precautions.

The salient points in the operation for inguinal hernia, are the following:

First.—Cleanse field of operation.

Second.—Incision half an inch from and parallel to Poupart's ligament, about three inches long and ending below at center of the external ring.

Third.—Divide the aponeurosis up to and above the external ring, on a director, push it well back exposing the shelving portion of Poupart's ligament.

Fourth.—Pick up sack and cord together and carefully separate them with the fingers. When this is accomplished, carefully empty sac, if the hernia is reducible, and then open it. If the hernia is strangulated, or the contents adherent to the sac, great care must be exercised in opening, not to wound the intestine, should the hernia contain intestine. The sac is then transfixed just within the internal ring and ligated, in doing this, care should be taken that no small knuckle of gut is down in the sac. The lower end or fundus of the sac may be dissected out, if not too large, or, if it extends far down in the scrotum, it may be cut across and the lower portion left in.

Fifth.—The aponeurosis is then turned back and held out of the way; the cord is held up while the first line of buried sutures is put in under the cord, making the new floor to the canal. These sutures are introduced from within outward, and include the internal oblique and transversalis muscles and fascia on the inner side and the deep shelving portion of Poupart's ligament on the outer side.

The best material for these sutures is kangaroo tendon. The cord is then laid down on this new floor and the aponeurosis is brought together over it by a continuous suture down to the pubes.

Seventh.—The skin incision is then brought together with interrupted sutures and the whole dressed antiseptically without drainage.

For femoral hernia the Bassini operation is the best that has been devised. The sac is cut down upon in a line parallel to and below Poupart's ligament and the sac opened and removed, as in inguinal hernia. The femoral canal and ring are closed with buried tendon sutures and the operation completed, as in the operation for inguinal hernia. Umbilical hernia in adults should be treated by operation upon the same lines.

The Bassini operation for radical cure of hernia, seems to have come to stay. Since the publication of Bassini's paper in 1890, several hundred cases have been operated, and the statistics of these cases show a percentage of only about two per cent. of recurrences and extremely few deaths.

I received a letter, a short time since, from Prof. DeGarmo, of New York, in which he stated that he would report to the American Medical Association, at its meeting of the present month, a series of 250 cases operated during the past three years without a single death and with but five or six recurrences. Probably the gentlemen present who attended that meeting, heard Prof. DeGarmo's paper. I, therefore, read my very imperfect paper and report of one case operated, with the greatest diffidence. My apology is, the desire I have to see this Bassini operation more frequently done. It is neither a difficult nor a dangerous operation, in ordinary cases, and the result is so satisfactory, relieving the patient, as it does, of the greater danger of a strangulation with its often fatal consequences.

On Monday, April 26, 1897, I was called in consultation with Drs. Fraser and Fenton, in the case of Mr. F. T. Found him with a right inguinal hernia which had been strangulated since the previous Thursday night. The doctors had made some efforts, the night previous, to reduce under chloroform, but failed. The patient was not suffering the extreme symptoms, such as would be expected if gut were down and strangulated for so long a time, but the symptoms were urgent enough to cause considerable alarm.

The patient was a man 32 years of age, and had worn a truss for this hernia, about twenty-five years. I offered an operation and it was accepted. Patient was prepared and the operation done at once. Upon opening the sac, I found the contents to consist of a slip of omentum about four inches long, very dark, and firmly adherent to a portion of the sac. This was transfixed well up in the internal ring, and, after tying it off in two portions, it was cut off and the stump pushed within the peritoneum. The fundus of the sac, which was not large, was dissected out and the entire sac removed after ligation at the internal ring. The new floor for the cord was made by using four kangaroo tendon sutures, and the operation completed in the usual way.

I left the patient in the care of Dr. Fraser, and saw him but once afterward—one week from date of operation, when I dressed the wound and found perfect union throughout. At that dressing I removed all but two or three of the skin sutures, and these were removed about four days later, by Dr. Fraser.

The patient made an uninterrupted recovery, never having a temperature above normal. The doctor writes me, under date of June 7th, that the patient is up and about his business, and is all right. No truss was put on after the operation; simply a pad and bandage.

This is too early a date to claim a cure, but, in the light of the reports we have of this operation, I feel confident the cure will be permanent.

A SALIVARY CALCULUS.

By IRA R. WOODWARD, M. D.,
Mercur Hospital, Mercur, Utah.

J. G., act 23, laborer, was admitted to the hospital Aug. 7th. The parotid, submaxillary and sublingual glands of the right side were enormously swollen, the tongue also was greatly enlarged and protruding.

He gave a history of a similar attack, seven years previous which lasted six days, the swelling subsiding without suppuration.

On entering the hospital the patient complained of difficulty in swallowing and of a pain in floor of mouth to right of the frænum lingue.

Two days later a tumor containing a hard mass formed over the right sublingual gland and was opened by a free incision.

Two fasciculated, cone-shaped calculi and a half ounce of pus was removed. The calculi were about the size of a pencil in diameter and a half-inch in length.

The swelling and inflammation now rapidly disappeared with the exception of the tongue which remained swollen for several days.

THE PRE-NATAL CULTURE DOGMA.

FRANCIS D. TANDY,
Public Library, Denver, Colo.

The theory that the condition of the mother exerts much influence upon the character of her unborn offspring is very plausible. Had it not been so, it would never have gained the number of believers it has had in widely scattered places and in many different times. But something more than plausibility is needed in this

age of scientific inquiry. A good measure of proof is demanded of all the theories which clamor for recognition.

In support of their theory, the believers in pre-natal culture offer a large number of cases, in which certain influences having been brought to bear upon the mother, the child has manifested characteristics corresponding to those influences. To base a theory upon this kind of evidence—the fact of two events happening in sequence—is one of the gravest logical fallacies. When one event happens after another, the first may or may not be the cause of the second. Even the fact that they frequently happen in sequence is not sufficient evidence. The connection between the two events must be demonstrated. Even then, a single instance in which the sequence is not maintained will be sufficient to invalidate the generalization. The observance of these conditions is all that separates science from superstition.

In past times it was observed that shortly after a certain old woman looked at a beautiful young girl, the latter fell sick and died. Similar events had been noticed before in connection with the same old woman, and so she was burnt as witch. We regard this as superstition. Why? Simply because the connection between the "witch" looking at the girl and the death of the latter is not demonstrated. This point is of vital importance in all correct reasoning. You may produce a thousand, a million, or even ten million sequences and any generalization made from them will be valueless, unless the connection between the events of each sequence can be fairly well traced. This is the weak point in the theory of pre-natal culture.

The Darwinian theory of evolution is accepted to-day by practically everybody. Even theologians are forced to accept its main propositions. But the followers of Darwin are divided upon the point of whether acquired characteristics are transmitted to offspring or not. That innate characteristics are so transmitted is held by both sides. The question is whether the result of a whole lifetime devoted to the cultivation of certain faculties, has even the smallest tendency to affect the character of the offspring. If this question is open in regard to the effect of one generation, it is unsettled in regard to the effect of innumerable generations. In fact, the disputants on both sides are quoting cases involving thousands of generations, in support of their arguments. So the question really is, does the acquired culture of innumerable generations have any effect upon offspring? When such a question as this is in dispute, it is hard to give the question of pre-natal culture any consideration whatsoever. When the theory of use inheritance is proven—if it

ever is—the question of the effect of a few months culture upon human offspring may be better worthy of consideration.

But even if these general considerations be overlooked, the possibility of pre-natal culture is by no means proven. Psychologists are agreed that the mind of a child is but very poorly developed at the birth. The first time a sensation is received, it leaves but a very slight impression upon the brain. As it is repeated it becomes more fully known and classified. One sensation offers a basis of comparison with other sensations and gradually the sphere of knowledge is widened. At one month of age very few babies can distinguish between two objects. At two months a certain amount of power of distinction is common. The experience of sensations received during the first month and during the pre-natal period, merely offers a basis for comparison with subsequent experience. It is not sufficient of itself to enable a baby to distinguish between two objects. From this degree of intelligence—or rather, almost absence of intelligence—deduct the experience that has been gained from sensations received during the month of life, and the mental-development of the child at birth is what is left.

It may almost be said that at birth the child's mind is absolutely blank. In fact the development of the brain would lead to such a conclusion. "According to S. van der Kolk and Vrolik it appears that in their relative proportions, the lobes of the brain in a new born child hold just the mean between those of a chimpanzee and an adult man. In the adult orang, however, the same proportion obtains between its different lobes and those of a new born child"* Before birth, then, the brain of the embryo must be of a lower stage of development than that of an adult orang. In the earlier periods of the life of the embryo lower and still lower stages of mental development are found. Before birth, therefore, the child is so poorly equipped mentally that it can hardly make any use of such impressions as it receives. Furthermore certain physiological causes prevent it from receiving nearly all impressions. It is surrounded by a fluid, which deadens to a very great extent anything which might otherwise produce a sensation. A sense of pressure, either from a sudden blow or from steady impact, a certain degree of heat or cold, these are about the only impressions which it can receive from without. Even these sensations are robbed of whatever educational effect they might otherwise possess by the low mental development of the subject.

Passing through the fluid which surrounds the embryo is a cord

*Periz Frist Three Years of Childhood, p. 5.

which unites the child to its mother. This is practically the only channel through which subtle mental changes could be conveyed. But, as far as is known, thought is a form of nervous action and cannot be communicated in any other manner than by nervous activity. There are a few nerves at each end of this cord, but for over three feet of its length there is not a nerve in it. It is made up of blood vessels and delicate connective tissue, through which the blood of the mother passess to nourish the child and no thought or intelligence can be communicated through it.

The fact that the embryo receives its nourishment, in the form of pure arterial blood, directly from its mother, establishes a very close connection between them. Anything that effects the health of the mother is very likely to effect the quantity or quality of the blood supplied to the offspring. So sickness or lack of nourishment in the mother is liable to produce sickness or lack of nourishment in the offspring. In the same way, any disease from which the mother suffers is very likely to be transmitted in her blood to the child. Any of these causes may retard the proper physical development of the child and, in turn, may react upon its mental development. Keep the mother healthy and her blood-state good, and the child will receive proper nourishment, and, in consequence, will develop as it should. If the mother is morose, sickly or fretful, the chances are that the embryo will not receive sufficient nourishment and it will be born into the world, a puny, sickly and, consequently, fretful child. In such a case, it is not that the child inherits the mother's fretfulness, but rather that it suffers from its mother's indigestion. These effects may usually be largely, if not wholly, counteracted by subsequent hygienic treatment.

This much truth there is then in the pre-natal culture theory; that if the mother be kept in good health, other things being favorable, the embryo will be properly nourished and will develop into a healthy child; that if these conditions be not observed the mental and physical development of the child will probably suffer. But this is very far from the theory of those who claim that the mental condition of the mother, for at most a few months, produces well-nigh overwhelming powerful tendencies in her offspring.

In spite of all these reasons for their lack of faith, those who do not believe in pre-natal culture are perpetually asked to explain this phenomenon or that. It is not incumbent upon the supporters of the negative position to explain such things. They have done their work when they have overthrown the arguments of the affirmative. This is another law of reasoning which is perpetually overlooked in popular discussions. The whole burden of proof and the

difficulty of explaining the universe are constantly being thrust upon the negative. Explanations are asked for all kinds of things, and most of them are inexplicable. Prof. Huxley used to say that the one great need of the evolutionary doctrine was an adequate theory of variation. Why one son of certain parents should be a poet and another a sculptor, we do not know. What we do know, is the fact that their mother read poetry before one was born and studied sculpture before the birth of the second, could not have been the cause of the characteristics. The same may be said in regard to birthmarks. The theory that these marks are caused by some unsatisfied longing of the mother, is almost too absurd for serious consideration. We know that a certain amount of variation exists in all species, the human race included. When that variation takes certain peculiar directions, the uneducated mind immediately jumps at a cause for it. If the variation is of such a nature that it reminds the mother of a certain incident of her pregnancy or a certain unsatisfied longing she had, she immediately magnifies that longing or that incident and all the other countless longings, to which pregnant women are subject, and innumerable other incidents are forgotten and the one in question is proclaimed as the cause of the variation.

The literature of the world has been ransacked for evidence of the truth of prenatal culture. Even the bible has not escaped. Men and women who repudiate its authority on every other point, suddenly discover in the story of Laban's cattle, a divine inspiration for the guidance of man. If they would but look around and see the whole mountains of evidence opposed to their theory, which goes unnoticed from its very abundance, they would assume a more modest tone.

NOTE—Mr. Tandy wishes to disclaim any intention of instructing the medical profession in physiology. This article was written as a popular refutation of a popular superstition.

A CASE OF PLACENTA PREVIA.

By S. A. PEDEN, M. D.,
Manzanola, Colo.

On August 16th I was hurriedly summoned to see Mrs. W., a lady who last menstruated on November 9th, of last year. As I had been engaged to wait upon her during confinement I of course thought she was in labor, judging from the date of her last menstruation.

On arriving at the house, which is about six or seven miles dis-

tant, I was told that she had been bleeding, and on inquiry I found that she had lost about a quart of blood. She told me this had come on unexpectedly and without pain or warning, but had been checked by lying down. On making a vaginal examination I could distinctly feel the edge of the placenta presenting at the internal os uteri, and above it the head of the child. The cervical canal was sufficiently patulous to admit the index finger. She was having no pains and no hemorrhage. As the patient was in good condition and good spirits I decided to wait and see if labor would come on without active interference on my part. On Monday, Tuesday and Wednesday nights I stayed at the house, as communication was slow in case of accident—that is, if we can consider further hemorrhage, in this condition, an accident. It is rather what we might expect.

On Wednesday morning, just before I left, she, in a joke, told me she thought she would do her washing that day, as she felt well enough.

On my way I stopped at the station, about three hundred yards from the house, and while there Mr. W. came and told me his wife was bleeding again. I lost no time in getting back to the house and found the woman blind, pulseless, delirious, extremities cold, and all the symptoms resulting from profuse loss of blood.

I now attempted to separate the placenta, but found it firmly attached. I ruptured the membranes and attempted to turn by the Bipolar method, but this could not be readily done, as the woman was still bleeding, and seeing that a further loss would place her in a hopeless condition and that no time was to be lost, I used a tampon. This was quickly done, as I had everything in readiness several days before. This effectually stopped all hemorrhage at once. I then gave her fluid extract of ergot \mathfrak{z} i every hour, brandy and digitalis. She soon began to show symptoms of a reaction. I now telegraphed for Dr. McDonald, of Rocky Ford, as I did not care to take the entire responsibility of treating such a serious case.

When the Doctor arrived, I explained the situation, and as our patient had rallied and was in a fair condition we decided to remove the tampon and turn the child if there was not sufficient dilatation to have stopped the hemorrhage—a condition which we rather expected—and there were symptoms of commencing pains.

On removing the tampon, no hemorrhage followed, and the os was dilated to about the size of a dollar. Pains got stronger and stronger, and labor went on nicely and was completed in about one hour, the child being dead. On attempting to deliver the placenta, the lower portion next the os uteri was found adherent. We tried

for a few minutes to pull this off, but finding this impracticable, and as our patient was again in a state of profound collapse, we took away what we could and left the remainder—a small portion—in the uterus.

She was now given restoratives, such as strophanthus, spirits of ammonia, brandy, and an enema of one pint solution of chloride of sodium. About an hour later, as there were no symptoms of a reaction, she was given hypodermically $\frac{3}{4}$ i, ether sulphuric. Soon after this, symptoms of improvement were noticed.

I lay down about nine o'clock, telling the family to let me know in case anything went wrong. Next morning I found my patient better. She is now doing nicely, is taking iron, quinine and whiskey, is eating corn bread, butter, fat meat, potatoes and the like.

If I had this case now I would rupture the membrane and turn just as soon as I could, on appearance of first hemorrhage. By this means I might have saved the child; at any rate I think its chances would have been better, although I might have lost both mother and child.

Most of us could make improvements if we could only do things over again, but unfortunately it is not given to man ever to do exactly the same thing twice. But I do not feel like censuring myself, when I obtained such good results.

News Items.

Drs. Wetherill, Hall and Leonard Freeman hunted for game among the quaking asp forests of Routt Co., late in September.

Dr. J. W. Graham, of Denver, is in New York looking after the interests of the meeting of the American Medical Association, next June.

Dr. Marinus W. Seamen, once prominent in his profession in Illinois, but who in later years has lived a retired life in Denver, died at the residence of his son in this city, Sept. 15th.

What a lot of Colorado physicians came down to Denver during the Carnival! What a jolly set they are! We had a personal visit from Drs. Dawson, Macomber, Kahn, O'Lof and Holmquist.

Dr. Vivian Pennock, of Silver Plume, one of the Journal's "constant readers," is changing his location to Longmont, his former home. While the Doctor regrets leaving a paying practice behind him, Longmont offers him better advantages for a home.

Dr. E. P. Hershey, after a long and faithful service as professor of clinical medicine at Gross Medical College, and visiting physician to the County Hospital, has resigned both positions and will hereafter concentrate his energies upon his private practice and his private hospital.

Dr. A. K. Worthington journeyed to Illinois last month to act as best man at the wedding of his neice. As this is Dr. Worthington's second approach to the altar, on behalf of somebody else, we are beginning to wonder why "John Alden doesn't speak for himself."

A medical department of the National Guard, of Colorado, has been established with Dr. Clayton Parkhill, surgeon general of the State of Colorado, in command, and Dr. R. W. Corwin, of Pueblo, and L. H. Kemble, of Denver, surgeons with the rank of major, and C. E. Locke, of Denver, assistant surgeon.

Dr. Carl Johnson contemplates following Horace Greeley's advice to such an extent that he expects to keep going west until he gets to China, where he intends locating for the benefit of his pocket-book. We hope this celestial haven will prove a veritable Klondyke for wealth and that the coin of the realm of Confucius will fall his way.

ALMOST A DAILY THING.—A conversation over the phone. Hello, COLORADO MEDICAL JOURNAL, this is Mr. ——. What do you know of Dr. —, up at —? Is he all right?" "Yes, we know him. He is a subscriber to this Journal." "Does he pay his subscription?" "Oh yes, promptly." "Well, I guess we will accommodate him. "Thanks" and "Thanks."

In our November number we will publish most of the papers that were read at the recent Sanitary Convention, held at Fort Collins, under the auspices of the Colorado State Board of Health. The meeting was a most successful one and the character of the papers read were of a high standard. We had arranged to have an extended report of this meeting in this month's Journal but limited space prevented.

The Colorado State Board of Health carried out a very interesting program at their recent sanitary convention, held at Fort Collins, Sept. 30 and Oct. 1. Drs. A. Stedman, H. W. McLauthlin, H. C. Crouch, W. C. Mitchell, Henry Sewall and E. J. A. Rogers, of Denver, A. D. McArthur, of Littleton, Sard Wiest, of Longmont, May Roberts, A. W. Killgore, Geo. D. Parkhurst, W. A. Kickland, W. P. Headden and E. A. Lee, of Fort Collins, and Hubert Work, of Pueblo, took part in the program and added to its interest by their knowledge of medical lore, relating to the subject.

THE COLORADO MEDICAL JOURNAL.

SUCCESSOR TO

THE COLORADO CLIMATOLOGIST AND DENVER MEDICAL NEWS.

A Monthly Journal for the Medical Practitioners of Colorado and Adjoining States.

EDWIN R. AXTELL, M. D., EDITOR.

E. A. SHEETS, M. D., MANAGER.

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VOL. III.

DENVER, COLO., OCTOBER, 1897.

No. 10.

Editorial.

Observations on the Beginning of Practice Anew.

When the writer began private practice a few years ago, locating in a country town, the centre of a populous farming district, he stepped at once into practice and was soon quite busy; he therefore escaped that period of inaction so trying to the newly fledged physician, the first few months of which are marked by surprise and later by discouragement that his abilities do not meet with ready recognition; the period in which he cannot understand why the people to whom he is introduced and who seem so friendly, still go to another physician when ill; the more serious period when he begins to lay the blame to the code of ethics which forbids him from placing his qualifications prominently before the public and he has thoughts of throwing aside the bonds which erstwhile seemed to be so worthy and dignified, almost forgetting those high moments when he has sworn he would rather starve to death under the code than become wealthy through irregularities. How pleased yet apprehensive of having done wrong is he when his name appears in "the paper!" and what a temptation is the money in view if he will get Miss X. "out of trouble!"

But I was mistaken when I said I escaped, etc., for behold the latter days have brought it to pass!

Having had enough in great plenty of country practice, the

long cherished plan of post-graduate study was entered upon, and finished, and then comes the entrance into city practice. Offices selected and furnished, stationery printed, everything in readiness. I enter the waiting room at opening of office hours, and find it empty, and the chairs retain polish for many days. Really, it is a strange sensation. No patients to-day? What is the matter? Ah! but here comes a visitor; observe the affability with which he is greeted and conducted to the private office, where he unfolds the benefits of his particular life and accident policy! The next caller leaves me some prescription blanks on the corner drug store; the next is a lady, and now I am sure of a patient, but no; "will I buy a chance in the raffle for a crazy quilt?" Another day, a trained nurse leaves me her address; I wonder if I will ever employ a nurse? The next is a book agent; well, I may as well get some books, I have plenty of time for reading. Then comes a young man who asks my charge for giving electricity to his wife; I learn that he wants an abortion and I refuse. Four days in the city, and two requests for abortion. How quickly people flock to a new doctor for that sort of thing.

Then four or five boys and girls want me to subscribe for a daily paper, thus aiding them to procure bicycles. Then a lady looking for another physician comes into my office by mistake; and sorrowfully I direct her erring feet to the fortunate confrere's office.

I am afforded opportunities to buy all sorts of merchandise, from wire coat hangers to autograph etchings. A young woman applies for advice regarding an acne papule on her dimpled chin; the visit is repeated next day and the next until I finally inform the fair sufferer that I do not desire to despoil her of her virtue, and I see her no more; I have since learned that others have danced to her pipings, and paid roundly in cash for the privilege.

And so it goes, until finally an occasional bona fide patient drops in and I begin to feel that I have at last broken the barriers and with renewed hope look forward to the day when I shall be spoken of by the public by my last name without the prefix "Doctor." That indicates that the acme of success has been reached.

G. H. S.

† † †

Yellow Fever in Colorado.

We hear on every hand inquiries as to the probability of an invasion of our state by this disease. In the epidemics of the past there is no record of its having reached within many hundred miles of our borders. The means of communication have been vastly improved of late years, however, so that we cannot be entirely as-

sured of such immunity, at least from sporadic cases, in the future. For the present year, however, we apparently have no ground for alarm beyond the possibility of the occurrence of just such sporadic cases, shipped in by rail. The season is already so far advanced here, however, that it is almost certain that no extension would occur in such an event.

All epidemics in the past that have spread to the North have occurred in the warmest months, and very few have reached the latitude of Denver. We have already had one frost, and as is well known the germ of the disease does not thrive in a temperature permitting frost.

Furthermore, no epidemic in the past has extended to an altitude materially over 1,000 feet, so that the chances for an epidemic spread of the disease here would apparently be very slight, regardless of season or means of communication. But a single case even exciting suspicion has as yet reached Boston, but a little further North than Denver, with its extensive water communication. Taking all these points into consideration, we may certainly assure our patrons that they need have no fear of Yellow Jack for the present.

J. N. H.

† † †

British Medical Association.

For the first time in its history the British Medical Association met outside of the British Isles. The sixty-fifth annual meeting was held in Montreal on Tuesday, August 31st, and the following three days. The Montreal branch of the Association is to be congratulated on the results of its efforts to make this meeting a success in scientific work, and enjoyable to everyone in attendance socially. The attendance was quite large, although, in some of the sections at least, were missed many of the prominent men of the mother country, whom one would liked to have seen present. The guests were for the most part practitioners from the United States, and among these Denver was numerically well represented.

The opening service was somewhat different from what we in America are accustomed to at a medical meeting. It consisted of service at the English Cathedral, on St. Catherine Street, at 12 noon. The sermon was by the Right Reverend The Bishop of Niagara, and while he trespassed a little on the time which was intended for lunch, I think everyone present felt better and stepped higher when he left the church, on account of the eloquent manner in which the Bishop praised our profession, and of course each individual appropriated the lion's share to himself.

The opening ceremonies, as it was designated on the pro-

gramme, took place at 2:30, in Windsor Hall, and consisted of addresses of welcome by the Worshipful the Mayor of Montreal; Sir A. Chapleau, Lieutenant-Governor of the Province of Quebec, and the Governor-General of Canada. The preliminary meeting closed with a very pleasing address by the President of the British Medical Association, Dr. T. G. Roddick, of Montreal. In order that we should be better acquainted with the city, the freedom of which had just been presented to us, we were taken on a trolley ride all around and through it. Montreal is largely French in its population, and in certain quarters it required a mental effort to realize one was still in an English city. The names, signs, language, were all French.

The afternoon closed with a tea and reception at the Art Gallery, given by Miss Roddick. At 9:30 P. M. we were programmed for a soireé at Laval University—Address by Professor Richet, whose subject was Pasteur—and a reception by the Governor-General.

The first day passed without any fatalities and at 9:30 on September 1st, the various sections were called to order by their presiding officers. The sectional meetings were held in the lecture rooms of McGill University, a most excellent place for such meetings. All the sections were within a stone's throw of each other in the beautiful college buildings surrounding three sides of the campus, and in a tent pitched on the green between them was the reception office where information could be acquired, and the tickets to various entertainments—the "Daily Journal," etc.—could be obtained.

The sections met at 9:30 each day, and at least the one which I attended—the ophthalmological—was always quite prompt in getting down to business. We were also quite prompt in adjourning at 1:30. At 2:30 the general meetings were held at Windsor Hall, a hall which is near the center of town and is in the same building as the Windsor Hotel, some distance from the University. The general meetings were usually confined to addresses in medicine and surgery and routine business, and continued about two hours. From that time until half past nine the next morning the professional man was submerged into the social man and the latter was kept quite busy showing his appreciation of the many kindnesses which were showered upon him.

There were three general addresses delivered on the three days. The first, in General Medicine, by Professor Osler, was a most scholarly production. His subject was "Medicine in Greater Britain." The second in Surgery, by Mitchell Banks, Esq., F.R.C.S.,

of Liverpool, on the "Surgeon of Old in War"; and the third by Dr. Herman Biggs, of New York, on "Public Medicine."

The general plan of not trying to make Jack a dull boy by working him all day, struck me as a good one. And I think we could profit by the example over here and devote less of our time to listening to papers.

Among the social features I will only mention three. The garden party in the grounds of the Royal Victoria Hospital, allowed us to inspect a most excellently arranged institution which Montreal can feel very proud of and owes to one or two of her citizens who have given the money necessary for its construction. Close to this modern hospital is the legitimate successor of one of the first, if not the very first, institution for the care of the sick founded on this continent—the Hotel Dieu. The present buildings were erected in 1859, but are only the fruit of the seed planted by Jeanne Mance in 1643. Possibly in the City of Mexico, hospitals existed previous to this date, if not, then this was the first institution of its kind in North America.

The reception tendered the Association and its guests by the Right Honorable Lord Strathcona and Mount Royal, on the evening of September 1st, was a memorable example of how many people can be squeezed into a comparatively small space.

The banquet of the Association was given in the large dining room of the Windsor Hotel. Over five hundred people attended. The after dinner speeches I suppose were very good, as they were all received with applause, but as very few who were seated in my neighborhood thought it necessary to cease talking themselves, during the replies to the toasts, I was unable to hear any of them.

Lord Lister was one of the most notable men present, and McGill University took advantage of the occasion to confer upon him, and several others, the degree of LL.D. E. C. RIVERS.

† † †

What Will We Do With It ?

Le roi est mort, vive le roi ! The Carnival of 1897 has come and gone, and on all sides it has been pronounced an unqualified success. Denver, and the State, has had a good time and has profited by it. We have been brought into closer relations with our fellow citizens, and the gain has been mutual. It has been an object lesson to have one's attention called to our material resources. Perhaps as astonishing as the pyramid representing the twenty-five tons of gold, the product of Cripple Creek, were the fruit from Grand Junction and the sheep and pig from Bent County. We have known that we were a mineral producing country. We are

now waking up to the fact that we are also an agricultural and horticultural country. A trip around the Horn any day this past month, would fully convince anyone of our agricultural resources, and the carloads of fruit laid down in the eastern cities equally attest our possibilities in fruit production. Colorado not only produces precious metals and grain; she has untold resources of coal, hard and soft; iron; building stone of all descriptions and of high crushing power; marble; onyx; oil; natural gas; and scenery of the grandest description and most inviting for vacation purposes. Was ever State more blessed?

Our attention was called to most of these facts as the floats in the "Pageant of Progress" passed our doors, this past week. The eastern journals, some of them, have had their special correspondents here to tell the country these facts. Visitors within our midst are going away self-constituted advertisers of Colorado. And yet it may be that the grandest thing of all, the most attractive of all, the most exhilarating and life-giving of them all, the most precious of them all will receive but passing mention, and that is the glory and excellence of the Colorado climate. Was there ever such sunshine, such air, such blue skies, such a moon, such a delight in out-of-door life, such *bien etre*, such light heartedness, such a joy in living? What a boon Colorado has been to us all! What a rescuer from fell disease she has been to many of us, it is hard to tell. We all owe her much and many of us owe her everything. The gracious warmth and dryness of her air, the genial cheer of her sunshine, the fresh breezes from her mountain tops, the broad expanse of her plains, and numerous other factors, have called many of us, and thousands upon thousands of our fellow men, back from the ways of death and have reinvigorated us with fresh life.

This is a fact so simple that it has very largely escaped heralding. It is a fact, however, more potent than the announcement of any so-called specific yet found. Now, what will we do with it? It has been said that the man who proclaimed the anaesthetic properties of sulphuric ether, so long and loud, that he compelled the whole world to hear, was deserving of the praise for that discovery. We can proclaim the virtues of Colorado's climate, the value of her springs, the charms of a residence within her borders, so long and so loud, that we can compel this country, and possibly the world, to hear, and can bring thousands upon thousands of valuable lives to this state, to reap with us the good things offered.

The beauty of it is that Colorado will stand all of the praise

bestowed upon her. No praise can be too fulsome. She is God's country.

Bearing this in mind and also bearing in mind the fact that the Doctors throughout the country have been the ones most interested in Colorado's climate, our profession, after considerable hard work, secured the meeting of the American Medical Association for 1898, for Denver. We have said that we want men from both sea coasts, and from the Gulf to Canada—and from Canada—to come and see for themselves. We have gone out and compelled them to come in, for the Association did not jump at the invitation. It required some iteration, some urging. But it has accepted. The Association is to hold its next meeting in Denver. And not only the American Medical Association, but some others, such as the Academy of Medicine, the Association of Medical Colleges, and others in its train.

Now, what are we going to do with it? We have a glorious opportunity. We can make a spoon or spoil a horn. Everything depends upon the use we make of this opportunity. We are dealing with a two-edged sword. It cuts both ways. Success means great things. Failure would be ignominious. Our people, our profession is so constituted that it has a pull on all quarters of our country. Denver and the medical profession of the State, are cosmopolitan. Our ties stretch north, east, south and west. We can draw we will draw from all quarters. Are our visitors going to sing our praises or chant our knell? The writer has no fears on this score, save the fear that comes from too great assurance, or from apathy. If the medical profession of Denver and of the State will show a united front and put their shoulders squarely to the wheel, the result cannot be in doubt. Boundless success will crown our efforts, and our visitors will go to their homes singing peans of praise.

But we have got to work. Eight months now remain for preparation. The hot weather is past and autumn freshness invites to effort. We must all work. All should contribute both effort and money. The undertaking should include the medical profession of the city and state. Individual appeals, personal letters, will contribute largely to the success of securing a large attendance. And then when the Doctors come, what will we do with them? But one thing—throw open the portals of the State. Let our hospitality be unrestrained. Give each stranger the best time he has ever had. It can be done, but it will require united effort, a long pull, a strong pull, and a pull all together. "England expects every man to do his duty," and so Colorado expects every Doctor to do his duty, and to make this coming meeting of the American Medical Associ-

ation within our borders, which Association will probably never come here again within our lifetime, the unqualified success of which it is capable.

There is still another thing to be considered, and that is the success of the Association itself. We should seek quality as well as quantity. The best is none too good for us. We are drawn from all quarters, our influence is far reaching. If we exert it we can draw in the best on all sides. We can make the Denver meeting notable for the quality of the work done, as well as for the members in attendance. We can add our influence to that of Philadelphia, at the last meeting, and help to make the American Medical Association the strong force for higher medical attainment that she should be. *Le roi est mort, vive le roi.* S. A. FISK.

† † †

Professional Philanthropists.

The pioneers of medicine have ample opportunity to study in all its disagreeable phases the professional philanthropist. Usually they are the hangers on of young charity institutions just beginning to bud into some prominence. You visit the institution and see its dreary quarters, its half equipment, its old furniture, its comfortable matron's room and you ask about its board of directors. Some of them may even be on the ground, keeping the matron company and enjoying her quarters. You find them a "hatchet faced" set of women, with direful forms and with brain cells of inferior development. Some of them may be sprightly, some have modesty, many have a certain native grace and a few belong to the highest social set. But in all, there runs the same vein of unfeeling, uncharitable philanthropy. They are there because they must use their time and because certain other women have seen fit to pick them out for this overseeing. They feel that they are doing their best and in most cases this is probably true. They know nothing of the work in hand and nothing of how to make it better. Instead of closing up institutions that have no right to exist because of insufficient funds they keep them open and make a show of doing good, deceiving the world and themselves. If the institution over which they have charge is a child's home, the record of children passing through it is almost *nil*. The matron tries her best, the Board of Directors come down and order hot cloths to the abdomen, the doctor is called, a professional nurse is insisted on but denied and the child dies. One after another of the babies die; continued improper feeding cannot be corrected. The Physician to the Institution offers suggestions, finds fault with the management and shortly becomes very much disliked by the professional philantro-

pists. They ease the sear on their conscience by repeating parrot-like to each other that the babies were of low vitality, and could not have lived, and they visit the doctor for fear that in his righteous indignation the matter will get into the papers. And they gently suggest that he oughtn't to feel so bad—that he has done all he could and to clap the climax they whisper, "Don't you think it is better for them that they are dead?" It is enough to change the idle current of one's thoughts to meet these holy fiends.

MONTHLY BULLETIN OF THE COLORADO MEDICAL LIBRARY ASSOCIATION.

T. H. HAWKINS, M. D., President.

LAURA LIEBHARDT, M. D., Treasurer.

HENRY SEWALL, M. D., Secretary.

J. C. DANA, Librarian.

NO. 2. OCTOBER, 1897.

THE PRIVILEGES OF MEMBERS. All books in the Public Library marked "Reference Works," cannot under any circumstances be loaned to the public. Members of the C. M. L. A. alone are allowed to take out any book whatsoever.

Every member has a right to order through the Librarian or the Secretary, any new or old book he may wish. Many members avail themselves of this royal prerogative.

Members from outside of Denver may take out any medical work he wishes to consult, by sending in a request with a list of books wanted. The books will be shipped at once and such books can be kept for fourteen days from the time of arrival, and renewed for another period of fourteen days.

Thus the library of the C. M. L. A., like that of the Surgeon-General's, is thrown open to the residents, not only of the State of Colorado, but of all the adjoining states. There is no excuse for diligent workers in the field of medicine to complain of lack of library facilities. The facilities are offered by the Medical Library of Denver. Send in your membership fee, together with a list of books you wish, and the books will be sent to you. In case a certain book is not found in the library, the Librarian will at once order the same especially for you. Don't you think, Doctor, that this scheme is a money-saver?

NUMBER OF JOURNALS.—It is indeed a wonder how far a little money, well invested and judiciously managed, will go. Just think of it! The library receives regularly 162 journals. It does not

subscribe to all of them, to be sure. Some of the members co-operate with the library, and send in their journals regularly. Dr. Hawkins, the Editor of the *Medical Times*, heads the list. He sends in all of his exchanges and makes a goodly show. Next comes Dr. Axtell, the Editor of the COLORADO MEDICAL JOURNAL, Drs. Kehr and Smythe, of the *Denver Homoeopathic Journal*. They all have a large number of exchanges, and not a copy gets lost.

The following gentlemen also supply the library with current periodicals: Drs. Bagot, Crouch, Fisk, Hall, Liebhardt, Munn, Sewall, Shannon and Wetherill.

NEW BOOKS.—The following standard works make up the accession list of October:

1. Albutt's System of Medicine, Vol. III. Certain General Diseases. Diseases of the Stomach and Bowels. 1897.
2. Lehrbuch der Krankheiten der Verdauungs Organe, Vol. I. Dr. W. Fleiner. 1896.
3. Die Vergiftungen. Dr. R. V. Jacksch. Vol. I Speciale, Pathologie und Therapie. Edit. by H. Nothnagel. 1897.
4. Twentieth Century Practice, Vol. XI. Diseases of the Nervous System.
5. Handbook of Climatology. By S. E. Solly. 1897.
6. Die Auskultation des Kindlichen Herzens. Von Carl Hochsinger. 1890.
7. Veterinary Notes for Horse Owners. A manual of horse medicine and surgery written in popular language. By M. H. Hayes. 1897.
8. Die Krankheiten der Nase, des Rachens, des Kehlkopfes und der Luftröhre. By Stock, Gerhardt & Hoffman. 1897.

NEW MEMBERS.—Drs. C. B. Lyman and Alfred Mann.

Members of the Colorado Medical Library Association who need certain journals to complete their files, can, by addressing Dr. Henry Sewall, have such numbers free of charge, if the Library has duplicates. For bound volumes, a small charge for binding is made. It is hoped that the profession will avail themselves of this offer.

C. D. SPIVAK.

Mr. M. M. Maybury has succeeded the firm of Maybury & Perry, the popular 16th street druggists. Mr. Perry has withdrawn to go on the road for Fairchild Bros. & Foster. His territory will be the West and those who know Mr. Perry can congratulate this eastern firm upon possessing the service of such a competent and agreeable gentleman.

The Denver and Arapahoe Medical Society.

This report is original with this JOURNAL, and appears only in this Journal.

The first meeting of the fall session was held in a small sample room at the Brown Palace Hotel, Tuesday evening, October 12th, 1897.

Present—Drs. Jayne, Spivak, Beggs, Bane, Black, Whitney, Waxham, Chase, P. D. Rothwell, W. H. Davis, Hopkins, Blaine, Love, Raynor, Ryan, Ford, Freeman, Hall, Hassenplug, Fleming, Burns, Stover, Sewall, Byington, Rover, Godfrey, Levy, McLauthlin, Grant, Wooding, Simon, R. Freeman and Axtell.

Dr. Jayne, the President, welcomed the society from its vacation and Dr. Spivak read the minutes.

Dr. J. W. Ryan, a graduate of The Gross Medical College, class of 1896, was proposed for membership by Dr. Leonard Freeman.

Dr. W. E. Rammel, a graduate of The Gross Medical College, class of 1896, was proposed for membership by Dr. Beggs.

Dr. E. J. Keen, was proposed by Dr. Burns and Dr. A. M. Chase, a graduate of The University of Colorado, class of 1893, was proposed by Dr. John Chase.

The Board of Censors through Dr. Whitney reported favorably on the name of Dr. Geo. H. Stover. He was elected to membership.

Dr. F. E. Waxham set the scientific ball rolling by reading a paper on, "The Identity of Membranous Croup and Diphtheria." He took the ground that they are one and the same disease except in a very few instances. He felt that bacteriology had fully settled the matter. He cited a number of cases of membranous croup in which the membrane alone appeared in the larynx, yet the bacteriological examination showed the cases to be diphtheria.

He thought we might have a pure inflammatory exudate in the larynx, but thought such cases extremely rare.

Dr. Sewall spoke of cases of membranous croup being difficult to quarantine. In certain small towns many cases of diphtheria are termed membranous croup and children from such families are allowed to attend the public schools.

Dr. Levy spoke of a child, ill for several days on whom he performed an intubation. In the case there was no membrane in the throat. The child was comatose but was resuscitated and lived for twenty-four hours and then died suddenly. After death a culture was made and the report was positive.

In another case a child with membranous croup was intubated and lived thirty-six hours and died. In this case the report was

positive. He felt that all such cases ought to receive the closest investigation.

Dr. Raynor reported the case of a boy six or seven years old, who had been sick for several days. The child had been put on calomel and in the steam tent. There was no membrane whatever in the pharynx. He gave turpeth mineral and a membranous cast of the pharynx was expelled. Later the child had diphtheritic paralysis.

Dr. Beggs thought the bacteriological findings in the two diseases to be the same. He spoke of Dr. Baumgarten's article on the "Pathogenesis and Etiology of the Membranes in Diphtheria and Croup," in which he maintained the two diseases to be the same.

Dr. Waxham emphasized the importance of the subject and thought that in an advancing case of dyspnoea in a child, that it should be isolated and a culture quickly made.

Dr. Boice who was on the program for a paper was absent.

Dr. Black presented "A Simple Pterygium Operation with a New Instrument." He presented the knife—which had been made and used for an iridectomy knife. It was a flat blade, right angled to its handle, pointed, with both sides sharpened. The pterygium was picked up at its middle with forceps and the knife passed under the pterygium and then cut away to its corneal attachment. It was then removed from the cornea. After which it was held up and fully separated from the conjunctiva, leaving an elliptical opening in this membrane. This was now picked up, some conjunctival dissection was made and the conjunctival margins brought together by two or more sutures, which are removed in from two to four days. He spoke of other operations and extolled the use of the knife which he presented.

Dr. Bane endorsed the use of the knife. He had used it with satisfaction—not only in pterygium operations but in removing cysts and small growths.

"A Case of Abnormal Position of the Vermiform Appendix," was the title of a paper by Dr. A. C. Godfrey. He spoke of the usual position of the appendix and then reported the case of a boy eleven years of age who suffered with curvature of the spine. He had had many attacks of colic. He ate some green apples and had all the symptoms of cholera morbus. A tumor mass and tenderness existed in the left iliac fossa. High injections were given but all symptoms of obstruction continued and the patient soon died. The autopsy showed the vermiform appendix enormously swollen, full of pus and containing several enteroliths, extending en-

tirely across the pelvis, pressing on the sigmoid flexure to such an extent that obstruction existed.

Dr. Axtell spoke of the various positions of the vermiform appendix which he had found in a large series of post mortem cases. He called attention to a recent report of three cases of left-sided appendicitis and to a few anomalies in the appendix in a recent posted subject.

Dr. Blaine, the Jolly Financial Secretary, jerked up a few of the society members for back dues and circulated a paper giving the names of those in good standing. He stated that with the November meeting the by-laws required him to present a list of the delinquent members.

Under new business Dr. Axtell spoke of the Denver Crematory Association and announced a public meeting of that society.

Dr. Jayne spoke on Dr. Spivak's scheme for keeping a record of the Society's proceedings and said he would willingly give financial aid to this movement.

Moved to adjourn.

At the next meeting, the Society will consider typhoid fever. An attractive symposium has been arranged.

Additional News Items.

Dr. F. B. Ambler is just over tussling with an attack of typhoid fever. He won.

Dr. J. N. Thomas has gone east for a six month's post graduate course at New York.

Married—In Denver, Dr. P. E. Hyrup-Pedersen and Miss May Murphy, October 5, 1897. The JOURNAL tenders its best congratulations.

Reprints from Drs. Love, Hyrup-Pedersen, Hawkins and Powers, of Denver, have been received and are gratefully acknowledged.

The first fall meeting of The Denver Clinical and Pathological Society was held Friday evening, October 15, at the offices of Drs. Hall and Hopkins in the Jackson Block.

Dr. Eskridge of this city, recently made a brilliant diagnosis of tumor of the spinal cord which on operation was confirmed and the tumor removed—with disappearance of most of the symptoms. The case attracted a great deal of attention.

Dr. Michael Hood, a recent graduate of Rush Medical College

at Chicago, died of tuberculosis at Fort Collins, September 24. Dr. Hood had been a resident of Fort Collins for nearly a year and had won for himself many friends in his new home.

A movement is on foot for the re-opening of the Francis Jacobs' Hospital on the Montclair line. It is being instigated by the Jewish Woman's Club, of Denver, which is well known for its ability to perfect plans for any charitable undertaking. It is their intention to have it opened as a charitable hospital for consumptives.

The Gross Medical College Alumni Association held its regular October meeting on the 14th, inst., at the residence of Dr. S. Simon, the Secretary of the Association, at 2425 Champa Street. Dr. W. E. Rammel read a paper, and a number of interesting cases were reported by other members. A lunch followed the scientific program.

We have the following pleasant letter from Dr. Edward Jackson of Philadelphia: "Keep on with the good work! The COLORADO MEDICAL JOURNAL must be of high interest and value to every one in the Rocky Mountain Region. But I doubt if any one appreciates it more keenly than one who is in exile from Colorado's climate and opportunities."

Dr. Seebass hands us the circular letters of the Illinois Standard College of Medicine and Surgery, which has its location in that city of wickedness, Chicago, which college offers outright to sell diplomas and the title of M. D., to whomsoever will answer a hundred questions which are sent with the circular of information. It is a gay fraud and its promoters would look best behind some strong steel bars; which place they will probably reach.

At the Denver meeting of the American Medical Association, the Senn Medal will be awarded for the first time. It is to be given to the member presenting the best essay upon some surgical subject. The competition for the medal will be closed three months before the next annual meeting and no essays will be received after March 1, 1898. Competitors will address their essays to J. McFadden Gaston, M.D., Chairman, 1½ Edgewood Avenue, Atlanta, Ga. We hope one of the young surgeons of Denver will capture this prize.

The opening exercises of the University Medical College, held at the college building, Friday morning, October 5, were attended by an interested body of listeners. Prof. Henry Sewall gave a very entertaining history of the Medical Department of the University of Denver with its struggles and its triumphs from its early organization to the present time including the account of the legal battle

with the State University, and the reorganization of the two faculties.

Dean Fisk spoke of the prospective year's work. Chancellor McDowell in his usually happy way referred to the newly organized faculty and the gentlemanly and dignified demeanor of those who accomplished this end.

Vice Dean Powers spoke of the loyalty and sincerity with which the new members entered into the work and that nothing but good will and a united effort for the good of the department was their purpose.

After a few announcements by the secretary the building was inspected by the visitors and students and the many new improvements discussed. The college adjourned for the three days of the Carnival and the regular routine of work was taken up on the following Friday.

"THE HOME AND HEARTSEASE"

Two years has The Home been open to the physicians of Denver and Colorado as a place where they could send their patients sick with tuberculosis—that class of refined and cultured men and women who find it not an easy thing to secure healthful and congenial surroundings which are at the same time within their means. During this time over 500 have been received and, as far as lay in our power, given a home—and the blessings of a *Christian* home. It has been rather a difficult thing to impress upon the physicians and people that this is not a hospital nor a sanitarium, and that there is a stated charge for all who come here. But the purpose of The Home has always been to furnish men and women of culture, refinement and education a home amidst such surroundings as would constantly enable them to feel they were in their proper sphere; and from these references are required so that none unworthy may unfairly take advantage of this. The cost has been and is \$8 per week, with the exception of a few suites of rooms which are larger and more elaborately furnished. Many applicants who were very sick were turned away, and yet almost constantly, save during July, August and part of September has The Home been filled.

So many too ill to be received have applied for admission to The Home that the plans of the founders were extended and the buildings increased so as to provide for the comfort of such patients; and on October 4, there was opened and consecrated

a new building to be known as "Heartsease." Here will be received from any physician tubercular cases of any stage. Nursing and most carefully cooked food, as well as a really beautiful room are provided, but not medical attendance, as each physician treats his own cases. There is no endowment and consequently each case must pay here a considerably larger sum than in The Home. Here the care, nursing, board, etc., will be \$25 a week. This will be a considerable saving over the cost of board, nursing, etc., in private houses. Besides this the new building is equipped with everything possible for the *best* care of this class of patients.

Every room is completely cut off from the surrounding ones by brick walls. Every room is painted in oil and has an open fireplace. There is a large and beautiful parlor, a dining room and porches. Each floor has its own diet kitchen where orders will be prepared with everything convenient and near. No order of food will be carried further than across the hall. The building is under the direction of a Superintending Nurse and each floor and room is under the care of trained nurses. The furniture is of the latest and most beautiful patterns, as well as being most carefully selected. The rooms are furnished in an exquisite manner, each one having oak or maple furniture, wicker chairs, oriental rugs, two or three most attractive pictures, and best of all, the sun all day long. The bath rooms and closets are finished in marble and tilings. In fact everything is a surprise to the most exacting mind.

This building has been made possible by the combined gifts of the donors of the other buildings. They have all been carefully inspected by several of these people lately, who expressed their highest satisfaction with the completeness, neatness, fitness, comfort and cheerfulness of The Home. The cost has been very great in placing all this in order, but has been done with the sole purpose in view to be a blessing to this great class of homeless sick. The Home and Heartsease make one of the greatest ornaments to Denver, and are known throughout the United States as a most notable example of wise philanthropy.

FREDERICK W. OAKES.

DEATH OF DR. W. J. MAXWELL.

On October 11, Dr. W. J. Maxwell, for many years an active practitioner in Castle Rock, Colorado, died of pulmonary trouble at Tuscon, Arizona, where he had gone for the benefit of his health. Dr. Maxwell was a genial man, a good citizen and well beloved. He joined the Colorado State Medical Society in 1894 and has still a membership in that association.

HOT BATHS IN COLORADO.

The Cleveland Journal of Medicine, of the same age as the COLORADO MEDICAL JOURNAL and like it a high grade medical publication, has recently had a representative at Glenwood Springs on a summer vacation and he writes entertainingly on "Hot Baths in Colorado" in the following vein:

"A few notes of one of the newer resorts, Glenwood Springs, may be of use, especially in view of the coming meeting of the American Medical Association to be held in Denver.

These Springs, which in some features resemble those of Arkansas and Virginia, are situated a few hours ride west of Leadville, Colorado, in the Rocky Mountains at an altitude of 5700 feet above sea-level. If one comes from the east over the Denver and Rio Grande road, the highest point is reached near Leadville at an altitude of 10,200 feet. The Royal Gorge of the Arkansas is passed through a few miles west of Pueblo, and the Canon of the Grand River just before reaching Glenwood Springs.

The town is on the bank of the Grand River, at the mouth of the Canon of the Grand, and is surrounded by mountains. The waters pour out of the hills from some fifty springs at a temperature of 127°. They are impregnated with salts and sulphuretted hydrogen and make their presence quite evident at a distance.

The tub bath is not so much in favor here as elsewhere. Its place is supplied by either the cave-tub or the swimming pool. The former may be described as a cross between a Turkish and Russian bath. A cave, with a natural hot spring, has been provided with a door and a few marble settees, an ample bath house has been built in front of it, and the rheumatic visitor walks clothed in the garb of the Ute Indians who preceded him, into a moist heat of 112°. The perspiration starts before one is fairly across the room, and a ten to twenty minutes' stay chases through the skin a goodly amount of poison, rheumatic, alcoholic or otherwise.

The pool is in the open air and is 600 feet long. It is kept at 90° Fahrenheit, and bathers may be seen throughout the year disporting themselves in the water and sliding down the chute. The latter is a toboggan-slide with the toboggan left out. It is of polished brass with water flowing down it, and it gives the effect of a reversed and enormously vigorous douche.

To explain the efficacy of treatment at springs it is not necessary to seek a mystic virtue in so-called natural over artificial heat, or in waters salted by the hand of Providence rather than the hand

of man. If it were possible to divert the mind of a patient with mountain scenery, to hoist him a mile into the air, to keep his thoughts from business, to keep him hard at work all day bathing and eating and resting and being massaged, and eating again, then would the artificial bath and the artificial waters be as good as the natural ones. That these things are quite impossible at home is obvious.

An out-of-door mountain life is of itself sufficient to determine a cure in many cases which come to such a resort. To club an unwilling burro up these hills furnishes a gentle and pleasing exercise for the arms; walking and even the bicycle start the perspiration and stretch the legs, and horseback riding jolts the liver. The main advantage of savage man over the civilized variety is in the elimination of poisons, and bathing is one of the few refinements of civilization which tends to their elimination rather than their accumulation.

Book Reviews.

URINALYSIS:—A Guide for the Busy Practitioner. By Heinrich Stern, Ph.D., M.D. E. R. Pelton, 129 Fifth Avenue, New York, 1897.

Seldom does a small book so capably cover the ground as does this small manual. It is truly a guide for the Busy Practitioner in the examination of urine. Not an unnecessary word is used. The directions for the various tests are explicit, simple and the apparatus recommended, ample for the practicing physician. He first lists the necessary apparatus and immediately takes up the tests for the various urinary compounds, normal and abnormal. The section on microscopical study of the sediment is excellent.

The publisher has made a handy and neat volume of it and its illustrations are good. The second edition needs an index, a method for the detection of the amount of uric acid and weights in both the old and new systems.

For November we will present carefully prepared book reviews of "Thayer's Lectures on the Malarial Fevers;" and "Phelps' Traumatic Injuries of the Brain." These reviews are crowded out this month.

The California Board of Medical Examiners have issued an official register of the physicians and surgeons practicing in the state of California. It is issued on the side as a financial investment.

THE COLORADO MEDICAL JOURNAL.

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Original Communications.

THE RELATION BETWEEN SANITARY SCIENCE AND SURGERY.

By EDMUND J. A. ROGERS, M. D.,
Denver, Colo.

Member State Board of Health, Professor Surgery University of Denver, Surgeon to St. Luke's Hospital, Arapahoe County Hospital, Etc.

The relation between sanitary science and surgery will at first thought seem remote to those who have not kept in touch with the great developments that have taken place in both of these departments during the past few years.

It is easy for all to see that many lives are constantly being saved through the study of the causes and of the means of preventing disease and how the work and experience of the practicing physician are thereby lessened in proportion as the amount of disease is reduced.

To the surgeon, however, the relation is the opposite, for this same knowledge of cause and prevention enables him to undertake and achieve results in the face of conditions before deemed hopeless.

Almost complete knowledge of the causes of the so called blood poisoning diseases, the infestious and spreading inflammations, Pyaemia, Hospital Gangrene and all of these destroying conditions so dreaded by the surgeons of the past, has through sanitary science been arrived at and the means of preventing them discovered. Now therefore, operations and procedures, before undreamed of, can be undertaken with great assurance of success.

It is but a few years since it was supposed that in the normal healing process suppurative inflammation with the free formation

of pus was necessarily present. Bacteriological investigation, has, however, now demonstrated that suppuration is nearly always caused by organisms entering the wounds from without the body, and that pus, instead of assisting the repair of the tissues really interferes with it, and more or less prevents the healing of the wounds. With this discovery, the study of the details of the work upon which surgical success depends, was transferred, in great measure from the wards of the hospital to the Bacteriological Laboratory and sanitary investigation operated side by side with clinical practice.

It is to the complete sanitary investigation, to the slow, diligent and conscientious observation of the workers in our sanitary laboratories that surgery owes its ability to save daily thousands of lives that would otherwise be lost. If therefore, human life has value the investigations performed in these laboratories have repaid their cost to the public many a thousand fold through the lives they have enabled surgery alone to preserve, and yet, this is only a small part of the good work that has been achieved through these workshops.

When Lister, reasoning from the results of the laboratory investigations of fermentation, announced to the medical world his belief that most of the diseases and disorders following injuries and operations were due to organisms entering the wounds from without the body, he was scoffed at as a wild theorist. He, however, had the means of practically demonstrating his theories, and the time was very short before almost the entire surgical world had adopted his teachings.

Had there been no means of investigation and research, no opportunity for diligent, conscientious observation, all these great facts proving the source of diseases in wounds and the means of preventing them could never have been discovered.

This discovery and its practical application was the beginning of the great revolution in surgery. With the acceptance of this theory, that disease is generally due to preventable causes arising outside the body, the new surgery began, and from this it has gone on with constant development, and it will go on developing so long as it works in close relationship to the investigation laboratories.

As an instance of the blindness of those who believe that all has been learned in any department of science, this story, probably founded on some truth, is related. Upon Lister's beginning the practice of surgery, his father-in-law, himself a world famed surgeon in Edinburgh, advised him to perfect himself in the then taught principles and practice of his art, for he believed that

they had then arrived at the zenith of their perfection as he could see no point in which these acknowledged principles and practice could be improved upon or added to.

Little did he dream that the man he was thus advising would annunciate a new set of principles which would revolutionize the science and practice of surgery.

The discovery of Lister that microscopic organisms were the causes of most of the morbid conditions in wounds was of such moment to the human race that it is already classed as one of the great events of history, and this new fact became the basis of investigations which have already led to developments far beyond the dreams of the wildest theorist, and yet we are but on the threshold of the knowledge of these microscopic living forces.

What wonder, then that the name of Lister has become a household word, and that honors and emoluments are heaped upon him by all the civilized world. He has justly received greater political and social advancement than has ever been conferred upon anyone of his profession, in his native land; and all over the world, universities and scientific bodies of all kinds, feel themselves honored in having the opportunity to honor him.

Had there been, however, no institutions where investigation and demonstration could be made, his theories would still be theories; or should purely scientific observation stop to-day the advance of surgery would also stop from further development.

Few, not studying the progress of surgery, realize the rapid advance it is making.

Lister believed in these infecting organisms and used powerful poisons under the name of antiseptics, to destroy them. The bacteriologists began the study of them, and step by step, more and more has been learned of them, until, to-day we know the life history, the mode of production, the favorite abiding place, the necessary food, the functions of life and the powers for injury of great varieties and classes of them. Now, much is known of where they are always to be found and how they find entrance into wounds, and as more is learned the means of preventing their inoculation become more efficient and much more simple. The use of powerful poisons to destroy them in the wounds has now given place almost entirely to easy harmless precautions against their finding entrance or if believed to be present for destroying their disease producing powers.

Thousands of able scientific students are devoting their lives to the study of this vast class of minute but all powerful plants, and we are, each of us, daily reaping personal benefit from their work.

Without fully equipped laboratories, with elaborate apparatus, this work cannot be done, and as the people at large are reaping the benefit of the result, it is the manifest duty of all communities to see that such equipment is furnished to those willing and able to go on with this work.

The knife and the saw were once the characteristic insignia of the surgeon, but now, of more consequence than these are the microscope and the apparatus for discovering and destroying these disease producing germs.

And from all this it has come about that an institution, once disease saturated and a place to be dreaded and avoided by all not forced by poverty to its refuge, has become a boon and a much to be desired haven from all suffering from injury and disease.

I refer to the hospital.

In surgery, especially, such elaborate preparation and such careful detail for effective prevention of infection from these ubiquitous disease producing organisms is necessary that it is almost impossible to have all that is necessary at hand for satisfactory use except where such work is being constantly done.

The modern operating room is a place peculiar to itself. Carefully arranged for effective work, though simple in its detail it is not a place to be extemporized for an occasion, but must be the result of long and elaborate study and care.

No operating arrangements are now considered complete unless bacteriological and other laboratories are working in conjunction with them. Scientific investigation must both guide it and follow the operation.

It is so easy for those who do not know to be misled that it is the duty of everyone to know at least the rudiments of these sciences. All that is invisible and silent in its workings, is more or less mysterious to and mistrusted by the ignorant, but to those who care to investigate and learn to see the workings of these minute death dealing microbes they are even more real and definite than the suffering and disease that follow the absorption of their poisons.

From what I have said, I hope that all appreciate that the chief element of success in surgical procedure is that surgical cleanliness. means, not only ordinary cleanliness but the practical absence of all disease producing organisms.

The great destroyer of all living beings is heat, and in consequence it is the great cleansing agent. Through its means alone absolute surgical cleanliness can be achieved.

It, however, cannot be applied to all conditions and so it is

necessary to use as supplementary to it, poisonous germ destroying agents, though each of these have some individual objectionable feature.

By means of heat, however, supplemented only by the free use of soap and water, such a degree of surgical cleanliness can be arrived at as has enabled many surgeons to achieve marvellous results. As in all other sanitary processes pure air and clear, bright sunshine are however always powerful adjuncts.

I trust I have said enough to show you the close dependence of the practice of surgery upon the investigation of sanitary science and to impress you with the fact in supporting institutions where these investigations can be made, you are bringing yourselves under the protection of an applied science that may perhaps save your own life or ease some of your sufferings but will certainly, sooner or later be beneficial to some one near and perhaps dear to you.

If I have awakened you to some appreciation of the great work going on about you in these life saving departments and aroused you to some degree of active personal interest and support in this work, my object has been achieved.

THE PREVENTION AND SUPPRESSION OF CONTAGIOUS DISEASES IN RURAL COMMUNITIES. *

By H. W. McLAUTHLIN, M. D.,
Denver, Colo.

Not long since, I read some verses written and published in the 18th century, at a time the so-called "black plague," supposed now to have been malignant diphtheria, was raging with fearful mortality in New England. In crude verse were stated the facts of the terrible scourge; the inability of the doctors to cope with it, although "they physicked long and physicked strong"; its universal prevalence, the rich and poor being alike afflicted. In the absence of any known cause or explanation, it was taken, not unnaturally, to be a special visitation of Divine disapproval on account of the sins of the people.

Shakespeare says: "all men pray when at their wit's end." So in this instance all persons were exhorted by the verses to unite in general fasting and prayer in order that an offended Deity might be appeased as speedily as possible. and the sacrificial slaughter ended. Our ancestors of that period were innocent of the first

* Read before The Colorado Sanitary Convention, held at Fort Collins, Sept. 30, 1897.

principles of the origin, spread, limitation and prevention of contagious and infectious diseases. Throughout the world countless human beings were annually sacrificed on this altar of ignorance and superstition.

But within the last fifty years a revelation in hygiene has been given us. The handwriting on the wall has been expounded. No one need longer be blind unless he will not see. With greater opportunities, however, come greater responsibilities; and upon the men and women of this generation these responsibilities now rest, beginning with physicians.

Small towns and country communities have both advantages and disadvantages over large towns and cities in sanitary matters. Among the advantages are, abundance of fresh air and sunshine, a smaller number of people, more out door life, plainer food and simpler habits. Among the disadvantages are, the greater exposure to inclement weather, lack of proper care regarding health and sanitation in general, (for country life favors a feeling of independence and security) small and poorly ventilated dwellings and school houses, difficulty in obtaining medical advice early, lack of facilities for the proper care and isolation of the sick, and in this state, at least, the special danger of infected drinking water. It is now generally understood that the diseases called contagious and infectious arise from special and specific germs; that filth, and unsanitary surroundings and habits do not *per se* originate them. Nevertheless, whatever tends to lower the vitality of an individual weakens his resisting power to disease so that less exposure on his part may be sufficient by giving the germs a favorable soil. This is particularly true of typhoid fever and pneumonia. Again, unsanitary surroundings are often excellent culture grounds for disease germs, so that their virulence may become many fold greater.

My own observation has been that country homes and their surroundings in these Western states are often extremely unhygienic. Farm work is never done, while here it is on so large a scale that there seems to be no time, possibly no inclination, to keep clean and snug, in and about the house, yard and out-buildings, as is characteristic of older states. There is a wide field for neighborhood improvement societies with their papers and discussions on hygienic subjects. In fact, is there any more valuable means to forward the prevention and suppression of contagious diseases in any community than the dissemination of hygienic knowledge? Most people can be relied upon to protect themselves, their families and homes, as soon as they fully recognize their responsibility and opportunity. In this as in many other im-

portant problems of the day education of the people (the masses) offers the best hope of rapid advancement and wise solution. How many voters remember, when casting their ballots for county commissioners, town trustees and councilmen, that the health affairs of their county, town or city are to be almost entirely in the hands of these officers, and that their fitness in this respect should be especially considered? After election they are required by law to appoint a physician as health officer of their district. Will they conscientiously appoint a conscientious physician for their advisor in matters of health? Sometimes they *neglect* to appoint one; sometimes they might as *well* neglect it as far as his being of any value to the community is concerned. True, qualified physicians will not always accept the office. As a rule however such physicians would not shirk this responsibility if they were sure of the full co-operation of the appointing board and of the better portion of the community.

In another way voters can help prevent and suppress contagious diseases, viz: Through the officers of the school board. The public school room is a most fertile ground for the spread of such diseases. Children are particularly susceptible, and here they are gathered, from all parts of the district, and for several hours during five days in the week, are closely confined within four walls.

Only the strictest rules by the school board and their faithful execution by the teachers should be tolerated. Scholars feeling at all ill, especially if the throat is sore, should be kept at home; or if sent to school, they should be sent home again and required to remain till entirely well. In a few cities the daily inspection of school children, by authorized physicians, is being practiced.

This method is expected to prove of great value in cities but is impractical in the country. Mothers are usually adverse to having their children kept from school unless they are really too ill to go, while it frequently seems to them entirely unnecessary to keep well children at home because they have been exposed to a contagious disease or because a brother or sister is sick with it. There is no doubt in these cases that this necessary precaution for the children of others makes it temporarily harder in the homes already infected. However were the tables to be turned these same mothers would demand that all possible precaution be observed.* Human nature is selfish.

In a recent epidemic of diphtheria in a country town of Arapahoe county, the closing of the school was opposed by the teacher and her friends. The reason given was that they did not believe the disease prevailing was diphtheria; although the diagnosis had been proved bacteriologically in several cases and there had been

one death. The real reason for the teacher's opposition was she did not want to make up time the following summer as it would interfere with her vacation plans.

Health boards and county health officers should be in close touch with the school superintendents of their districts, and through them with the teachers. In Arapahoe county the plan is working well of having the superintendent send a letter, which is provided by the county health board, to each teacher in the county's jurisdiction, requesting her to report at once every known or suspected case of contagious disease, coming to her knowledge and within her district. The superintendent, in turn, reports to the health officer.

When a contagious disease of considerable danger arises in a country community, during the school year, the safest course is to close the school at once. In fact, if this is not done a dearth of scholars soon closes it.

The same is true of church and Sunday-school services, particularly as they are often held in the school house.

I am convinced that too little attention is being paid to the vaccination of children in country settlements. There has been no epidemic of small pox in northern Colorado for several years. "In time of peace prepare for war." Multitudes of children are growing up unprotected by vaccination against small pox. Thus the fuel already exists. Some unexpected circumstance will furnish the spark.

It seems to me not only wise but possibly economic for county health boards to canvass the outlying districts and vaccinate the unprotected without charge. The Arapahoe county board voted, some time ago, to vaccinate those in its district who applied for it. The only efficient way however seems to be to go and offer it to the people. A very few cases of small pox in some isolated portion of a county will be very expensive to the public compared to a vaccination canvass.

The individual and family responsibility, however, to look after the question of vaccination is none the less.

The suppression of contagious diseases is greatly aided by the early calling of the physician in all cases of sickness. The power to diagnose disease skillfully comes only from long study and practice. How foolish then to believe that any one, by the aid of a family doctor book, or a relative, or a motherly neighbor, can correctly determine the disease from which his or her child is suffering. Physicians know the great value of prompt and early treatment in shaping the course of a disease and in preventing compli-

cations; while without the early isolation of a contagious disease it is sure to spread. Young children are particularly susceptible to certain contagious diseases, for instance scarlet fever. Now if they can be kept from contracting this disease, until say fifteen years old, the chances are largely in favor of their never having it. Mild cases of the disease are quite puzzling and we not infrequently find, that without being suspected by the family, scarlet fever has not only been present but has infected others, some of whom may have it in a serious and perhaps fatal form. It were well if mothers could know the importance of watching for a rash in children suffering from even a slight sore throat, who have not had scarlet fever. For a sore throat attended with a redness of the body, especially the parts warmly covered, can be assumed, in the absence of a physician, to be scarlet fever.

There is a popular delusion that scarlatina is not scarlet fever. They are one and the same disease and the mildest case is contagious.

In the light of to-day there is probably no disease in which the early application of the proper treatment is of so great importance as in diphtheria, including membranous croup. It appears to be a fact, however disputed, that diphtheria antitoxin has revolutionized the prognosis and treatment of this disease. The best effects of the remedy are only obtained when administered in full amounts and early in the disease, i. e., within the first 24 or at least 48 hours. If administered for the first time after the fourth day, the damage has likely already been done, and death from heart failure or some form of blood poisoning may occur in bad cases as if the antitoxic serum had not been used. Well children in a family with diphtheria should also receive the antitoxin, as it may quite likely prevent their contracting it, and if not the form will be modified materially. In country districts this early treatment will be impossible without the early calling of the physician, as the antitoxin must usually be obtained from a medical center. It should be given in a suspicious case without waiting for a bacteriological diagnosis.

It is important that the State Board of Health should know that local health boards are awake to the importance of these facts, and that they are in touch with a supply of fresh antitoxin. Undoubtedly it should be furnished free by each local board if the cost will prevent a family from securing it. I am aware that the early calling of a physician in sickness means paying for some visits that time will show were not really necessary. I believe, however,

that in the end the economy of such a course will appear. Funerals are expensive and are otherwise undesirable.

A word about unnecessary exposure to disease in country districts. My experience has been that people living in country districts are perhaps more willing to receive and follow the advice of their physician and health officer than are their city cousins. But they are too unsuspicious and careless in exposing themselves and their children unnecessarily to an unknown sickness at a neighbor's house when not cautioned against it. For instance all the families in one settlement, in eastern Arapahoe county, attended the funeral of a child who died from a malignant sore throat. An epidemic of diphtheria was the result. In another case children acted as pall bearers to a child dead with diphtheria, as the attending physician should have known.

Neighborly kindness and sympathy are nowhere so honestly and simply shown as in the country; but in the face of sickness, possibly contagious, a wiser and more cautious expression of these virtues is more commendable.

The Boiling of Drinking Water. Water plays a large part in the civilization of Colorado. Like some politicians it has its price. Not infrequently in the country it is more difficult to get good water than poor beer. But when farmers allow their families to drink ditch water, as they sometimes do, such trust reminds one of the worshippers of the Ganges in India. There, parents drown their child as a sacrifice to the river gods; here it is typhoid fever instead of drowning. With the doctor's interests aside, drowning is the more humane method of sacrificing either children or adults. Undoubtedly much typhoid fever might be prevented in rural districts if all water used for drinking was properly boiled. Tank reservoirs are frequently used and in these the water may become contaminated. In fact, however fresh and nice water may seem for drinking, this is no proof that it is not contaminated with the germs of typhoid fever.

Responsibility of the Attending Physician. When the physician attending contagious cases fails in his duty to the public, it is like a railroad train running without orders. The statement may as well be plainly made that at times the health officer's worst stumbling block in the country is the attending physician; and he quite likely comes from a city or town where he is accustomed to comply strictly with rules regarding contagious diseases.

It is said that people away from home sometimes do as they please and not as they ought. This may be one reason why phys-

icians from the city do not always report to the proper authorities contagious cases in the country.

Occasionally he is deterred from reporting by the request of the family; occasionally he does not know that he is required to report; generally he fails from sheer carelessness. A severe case that will likely die is more apt to be reported than a mild case, and yet the latter is equally and perhaps more dangerous to the public.

It is still more reprehensible for the physician to lean *from* rather than *towards* the worst in stating his diagnosis and giving his instructions to the family in a known or suspected contagious case. Safety ought always to have the benefit of the doubt. Besides, the advice and instructions of the family physician go further and are taken more pleasantly than from a health officer. The important question of when the children shall be allowed to return to school is best left with the health officer to decide.

I most firmly believe that a thoroughly practical but full course in hygiene must soon be taught in our public schools. Sloyd, cooking, sewing, music, and other useful and necessary, although not literary subjects are already in the larger schools in this country. Of how much greater importance is instruction in the art of preserving health, preventing disease, and prolonging life. Much benefit would come from popularizing this part of medical knowledge as much as possible. Medicine has still too much of the old time superstition clinging to it. Asafetida bags suspended from the neck are yet on duty to keep off contagious disease. Potatoes are yet carried in the pockets of rheumatics. It is unwise for this duty of public education to be left entirely with the busy physician, as at present. Besides he must continually keep the public informed on the more recent discoveries in hygiene which we have great reason to believe are to be many and important in the next few years.

A writer tells how a little child once preached a wonderful sermon to him.

"Is your father at home?" I asked a small child on our village doctor's doorstep.

"No," he said; "he's away."

"Where do you think I could find him?"

"Well," he replied, with a considering air, "you've got to look for him some place where people are sick or hurt or something like that. I don't know where he is, but he's helping somewhere."—*National Recorder.*

ADVANCES IN THE DIAGNOSIS AND PREVENTION OF TYPHOID FEVER. *

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Typhoid fever is a disease so protean in its clinical manifestations and oftentimes so masked by one or more dominant symptoms which may also belong to other grave disorders that even in the best equipped hospitals in the world, the disease is at times never recognized until the pathologist's knife has laid bare the ulcerated intestine.

Although it is not within my province to speak as an experienced clinician as to the fact that a typhoid infection may so impress itself upon certain organs, for example, the kidneys, as to simulate an acute nephritis, or upon the cerebro-spinal membranes as to leave no apparent doubt but that the case is one of cerebro-spinal meningitis, yet I would like briefly to call your attention to a few tests which may aid in the diagnosis of typhoid fever, especially as we not infrequently meet here with a low, non-characteristic, febrile condition variously classed by different practitioners as malaria, mountain fever, or mild typhoid.

The disease with which typhoid fever is frequently liable to be confounded in a large portion of this country is intermittent fever of the type known as estivo- autumnal, and although it is an unsolved problem as to whether cases of malaria may originate at these altitudes, yet as we have a large population drawn from districts known to be so infected, in the case of a non-distinctive continued fever, a previous, or it may be, a present malarial infection is to be suspected. Malaria having been eliminated, one will do well to concur with the opinion of Murchison that a fever running for ten days or more in a temperate climate and without local manifestations is likely to be typhoid. Many lives may be thus saved.

The question as to the malarial origin of the fever may be settled by an examination of the blood for the malarial parasite first discovered by the French military surgeon Laveran. As a rule little difficulty will be experienced in discovering the plasmodium, but in those chronic malarial infections in which the parasites seem to lie dormant until a reduced bodily vitality allows them to multiply sufficiently to assume their former role, the haematozoa may

be extremely difficult of demonstration except by repeated and careful examination. However that may be, we now have an absolute means of diagnosing malaria, a disease, which before the day of the plasmodium, was so confounded with typhoid fever as to cause Woodward to coin the word "typho-malarial," a term now abandoned by all who understand the etiology of the two diseases.

The blood-examination may further prove of practical value by giving definite data as to the presence or absence of leucocytosis, or increase of white blood corpuscles. In typhoid fever the proportion of white to red cells is slightly towards a decrease rather than an increase in the number of white cells, the normal number being about 8,000 white cells per cubic mm.

The absence of leucocytosis in typhoid fever and its presence in obscure inflammatory, suppurative or septic conditions may often aid very materially in establishing the diagnosis.

As far back as 1883, Ehrlich described a reaction, the diazo-reaction, which he at first claimed was peculiar to the urine of typhoid patients. The reaction, as is well known, consists in demonstrating certain chromogenic compounds in the urine. The demonstration is as follows:

40 c.c. of a mixture of

Sulphanilic acid,	-	5 grms.
HCl	-	50 c.c.
H ₂ O	-	1000 c.c.

and 1 c.c. of a mixture of

Sodium nitrite,	-	0.5 gm.
H ₂ O	-	100 c.c.

are mixed with an equal quantity of urine and 1 c.c. of NH₃ is allowed to flow down the side of the test tube by means of a pipette. If the chromogenic compounds are present, an orange-red ring will be formed and the foam tinged a rose-red.

Unfortunately for the test, this reaction occurs at times in other febrile and septic conditions and is not always present in typhoid urine. It was present in 136 out of 196 cases examined in Osler's clinic and Strümpell claims that the urine of a typhoid patient almost without exception gives the diazo-reaction at the height of the disease.

With the advent of the bacillus typhi abdominalis as the etiological factor of this disease, the hope was immediately raised that in the demonstration of this specific bacillus, we would have a criterion which would at once establish the diagnosis beyond all controversy. From the date of obtaining this bacillus in a pure culture in 1884, down to 1896, 365 methods had been devised for its

detection in typhoid stools. Although it is *possible* by many of these methods to isolate the bacillus, yet none of them have proved of sufficient practical utility to be of value as adjuncts to clinical work, and with one exception we are as little aided in making a diagnosis of typhoid fever during life by the aid of the typhoid bacillus as if such a bacillus did not exist. This one exception is that cultivations made from punctures of the spleen in typhoid cases give cultures of the typhoid bacillus in a large number of cases. But this is an expedient not without danger to the patient and as Welch* graphically states, "Anyone who has seen at autopsy a swollen, soft typhoid spleen, with its capsule distended to the utmost and ready to burst the moment it is lifted from the body, would certainly hesitate to insert even a hypodermic needle into such a spleen during life."

Since the cultivation of this bacillus from typhoid stools yielded such meager results, the outlook for its utilization as a diagnostic means did not appear encouraging.

In June of 1896, Widal(†), an ardent worker whose name has long been associated with researches on the typhoid bacillus, announced before the *Societe Medicale des Hopitaux de Paris* his discovery of the fact that there was produced in the system of typhoid infected individuals a substance which when brought in contact with a pure culture of the typhoid bacillus caused the bacilli to lose their motility and bunch or group together.

Although Charrin and Roger* had noticed that groups of the bacillus pyocyaneus were precipitated as flakes in the serum of animals rendered immune against this bacillus, and Metchnikoff† had made similar observations with regard to the vibrio Metchnikovi, yet Widal's discovery may be more properly said to be based on the researches of Pfeiffer with regard to artificial immunity from cholera and typhoid fever.

Pfeiffer‡ demonstrated that the blood-serum of animals immunized against the spirillum of cholera caused an immobilization and disintegration of the spirilla, while towards all other bacteria such serum acted as a normal serum would act. Later, the same phenomena were shown by Pfeiffer and Kolle§ to be true with reference to typhoid serum and the typhoid bacillus.

This so-called Pfeiffer's phenomenon, which is in reality a disintegration, is a different reaction from the agglutination reaction

* Journal American Medical Association, Aug. 14, 1897.

† La Presse Medicale, July 29, 1896.

‡ Compt. rend. Soc. de Biologie. Nov., 1889.

§ Annales de l'Institut Pasteur, Tome V, p. 473, 1891.

¶ Zeitschrift für Hygiene, 1894. Band XVIII.

§ Deutsche med. Woch., Nos. 11, 12, 1896.

of Widal, and although Pfeiffer called attention to the fact that his phenomenon might be useful in diagnosis, yet the credit of introducing the serum-test as an aid in the diagnosis of typhoid fever belongs to F. Widal.

In his communication to the Society, Widal announced two methods by which the reaction might be obtained. According to the first method a few drops of blood obtained from a puncture of the finger were collected in a sterile vessel. When the blood had coagulated, one part of the serum was mixed with ten parts of a fresh 24-hour old bouillon culture of the typhoid bacillus and examined in the hanging drop under the microscope. If the case was one of typhoid, the bacilli, naturally motile, lost their motility and grouped or bunched together. The reaction was completed in some cases in a few minutes, in others it was delayed several hours.

According to the second method, this bunching or agglutinating reaction was to proceed on a larger scale. Several cubic centimeters of blood were taken from the median vein by means of a sterile hypodermic syringe. When the serum had separated, eight drops of this fluid were added to four cubic centimeters of a fresh bouillon culture of the typhoid organism, and this mixture was placed in the incubator at 37°C. If the case from which the serum had been taken was one of typhoid fever, after from 8 to 12 hours the cloudy culture exhibited a flocculent sediment in the bottom of the tube and small agglutinated bunches along its sides.

For obvious reasons the latter method has not been generally adopted.

Wyatt Johnston deserves the credit of having modified Widal's serum test so as to allow those who have neither the time nor the facilities for cultivating broth mixtures of the typhoid bacillus, to send their specimens to a central station where the blood could be examined.

My experience with this test has been confined to the examination of the blood of 36 cases, 9 before and 27 since my connection with the Denver Health Department. Of this number, 23 cases were either undoubted typhoid fever or regarded as being the same.

A positive reaction was present in 19 cases, thus leaving 4 cases in which the test did not bear out the clinical diagnosis.

Of the 12 cases which at the time of examination were regarded as possible typhoid fever but which afterwards proved to be other affections, the serum test and the diagnosis agreed in every instance.

To recapitulate then, we have,

	NO. EXAM.	REACTION+	REACTION—
Cases finally believed to be typhoid.....	23	19	4
Cases finally believed not to be typhoid..	12	0	12
Cases doubtful.....	1		1

Three cases which were examined are not included as their histories were withheld.

Thus, this comparatively small number of cases makes the per cent. accuracy of the positive results 82 and of the negative results 100.

The test may be said to have not yet passed out of the experimental stage, as the virulence of the typhoid culture and of the exact degree of dilution of the blood have yet to be determined. Also in a recent communication from Dr. Wyatt Johnston he informs me that he finds the results largely depend on the reaction of the bouillon, that of a given slight acidity with phenolphthalein indicator producing the most favorable degree of growth.

The serum test for diagnosing typhoid fever has come to stay. A year's experience with this method by different observers throughout the civilized world has served to dissipate the doubt and distrust with which it was at first received, and it is not looking too far ahead to believe that eventually the test will be reduced to such an accurate and simple technique as that it may be used almost with the same precision in diagnosing typhoid fever, as the demonstration of the tubercle bacillus in tuberculosis, or the diphtheria bacillus in diphtheria.

And now a few words as to the prophylaxis of typhoid fever.

The progress of the bacillus typhosis through this country alone is marked by an estimated average of 50,000 deaths per annum and 500,000 other cases, which, although they eventually recover, are prostrated with typhoid fever for a certain length of time with all that that entails of suffering, anxiety, doctors' and drug bills, nursing, and loss of time and wages.

Sanitary science has demonstrated that these lives and this vast amount of suffering and expense could be saved.

Knowledge increases power; it also increases responsibilities; and the irrefutable knowledge that every case of typhoid fever is the progeny of a pre-existing case, and, moreover, that the method of its transmission is almost exclusively by way of the domestic water supply, has brought an added duty to the responsibilities of the public guardians of health, to see to it that our potable water supplies, both public and private, are uncontaminated and above reproach.

Since the bacillus of Eberth is the sole cause of this disease and is passed in the feces, and since it is the fate of this fecal matter to become ultimately suspended or dissolved in water which *may* be used as a domestic supply, it is obviously of paramount importance to render this virus impotent at its source. It is not necessary for me to call attention before this society to the prophylaxis to be observed in the sick room as to sterilizing articles of bed clothing, pans, etc., which may have been contaminated with the stools, but it is of the greatest importance to ever bear in mind that the dejecta of a single typhoid patient, if not properly cared for, may form a center of infection from which hundreds of other cases may develop. We must agree with Woodbridge*, that every attack of typhoid fever is *prima facie* evidence that the victim has eaten or drunk unsterilized human excrement, or some of the products thereof, and that somebody has sinned and somebody should be held responsible. Moreover, in addition to the typhoid bacillus, and in the same category the bacillus of Asiatic cholera, human stools at times contain such pathogenic organisms as the bacillus of tubercle, the diphtheria bacillus, the tetanus bacillus, and the pus micrococci. Obviously then, apart from all aesthetic considerations, the proper disposal of this waste of human consumption is one of the gravest and most important problems of hygiene, and *inextricably blended with it is the prophylaxis of typhoid fever.*

In the country, where not infrequently, for the sake of convenience, the well and the privy are in close proximity, the water is exposed to the seepage of the closet and it may be also from the waste water of the household in which bed-linen and other typhoid contaminated articles may have been washed.

The first step to protect the water supply should be directed towards the closet. This should be impervious enough to prevent any outflow whatsoever. In lieu of this, the time-honored custom of the use of ashes is an excellent one, as thereby the moisture and gases are consumed and oxidation favored. Such precautions as these and in addition the proper disinfection of typhoid dejecta, when such cases arise, would answer in almost every case to protect the water supply. The waste water which contains dissolved or suspended the refuse of the household such as water used for cleansing utensils, clothing, scrubbing floors, etc., should be lead far enough away by means of water-tight trenches to shut out any possibilities of it entering the water used for domestic purposes.

Although I have no experimental evidence to offer, yet from the fact that cases of undoubted typhoid fever occur in mountain-

* Journal of the American Public Health Association, July, 1897.

ous regions so sparsely populated as to almost preclude the possibility of human infection, it seems not altogether improbable that the typhoid bacillus may enter and thrive in the intestinal track of cattle, which although not themselves affected by the micro-organism, may, so to speak, pass it on in a virulent form. From this and other considerations, it naturally follows that the domestic water supply be as carefully protected from the refuse of the stable and the cattle yard as from that of the household.

I am aware that these few remarks on the prophylaxis of typhoid fever present nothing new, indeed, they form an old and oft-repeated tale, and one so simple as to be almost pathetic, yet in all its simplicity, I venture to say that the methodical and constant observance of these few fundamental rules of hygiene would soon place typhoid fever among the rarest of diseases to be met with in a country practice.

But as paradoxical as it may seem, it is in the cities, the cities with all their crowded filth and the waste of modern life, where the greatest advance has been made in the prevention of typhoid fever. Not in all cities alike, indeed, for our American cities hardly belong in this category, but in certain of the continental European cities, and cities which of necessity take their water-supply from watersheds densely populated and subjected to the contamination which that entails, typhoid fever is becoming a clinical rarity.

When one considers that the city of Berlin for the past six years, from 1890-1895 inclusive, had an annual typhoid death rate of but 7.5 for every 100,000 population living and that for the same length of time, 27 of the foremost cities of the U. S. and one from Canada had an annual death rate of 40 per 100,000 population living, it is time for the medical profession to awaken from their lethargy, investigate this great loss of life and see that a remedy is applied, if a remedy there be. No better evidence is needed that a contaminated water supply is responsible for the typhoid cases than the fact that whenever and wherever proper means for its purification have been introduced, the number of cases has fallen away in a ratio commensurate with the improvements.

In the hurry and bustle of city life, people have not the time and will not take the trouble to boil or otherwise sterilize the water consumed domestically, and since modern science has demonstrated beyond assailable that typhoid fever is essentially a water borne disease, it has become the imperious duty of our law makers to see that a purified water-supply flows through the mains of our cities. The word "essentially" is used advisedly. Although there are other means of conveying typhoid fever than by the water sup-

ply, such as milk, either diluted with infected water or transported in cans or jars washed with the same, vegetables irrigated with contaminated water, or oysters grown on contaminated feeding grounds, yet the number of cases dependent on such causes must of necessity be small. In an extensive epidemic in Massachusetts, Sedgwick* found that only 1 per cent. of the cases could be traced to the milk supply.

The most recent investigations in Germany have also shown to be without foundation the belief, popular to a large extent among the laity, and not altogether wanting in the profession, that the typhoid fever organisms may be scattered by currents of air and thus set up infection. E. Germano† has demonstrated that the bacillus of typhoid fever cannot outlive complete desiccation and hence after drying so as to be carried by the air and in dust is harmless as an infecting agent.

It is to the water supply then that by far the greatest attention must be directed. The proper purification of the water supply of a city is a task of no mean magnitude and is to be accomplished only by means of properly constructed filter plants. Such a plant usually consists of a series of filter beds of from one-half to one acre in area. The beds are constructed of layers of stone, gravel, sand, and very fine sand superimposed one above the other so that the coarse layers act as supporters for the finer ones. The top layer which in the best plants consist of grains of very fine sand of about 1-100 inch in diameter, is usually about 36 inches in depth, and it is this layer which is essentially the filtering part of the plant.

In its passage through such a layer of sand, the water soon deposits in the interstices at the top, numerous bacteria, algae, and diatoms, which by their rapid growth form a thick and practically bacteria proof network, the *Schmutsdecke* of the Germans.

Such a membrane while allowing the water to pass unobstructed, effectually retains the microscopic as well as the coarser beings of aquatic life. A properly constructed filter will and does remove at least 98 per cent. of the bacterial life.

After from three to four weeks, according to the amount of suspended matter which the water contains, such a filter-bed will work itself "dead," i. e., offers such great resistance to the passage of water as to interfere with its proper functioning. Such a bed is cleansed by scraping off the *Schmutsdecke* and about one inch of the sand immediately below it. It is usual to keep the sand until several such scrapings have been made, after which it is washed

* Massachusetts State Board of Health, 1891.

† Zeitschrift für Hygiene, 1897.

and returned to its former place.

According to Koch*, a filtered water must contain 100 bacteria or less per c.c., and this limit is based on his studies of the filter plants at Hamburg and other places during cholera and typhoid fever epidemics.

Prophylaxis is of far more importance than treatment. We, as physicians, individually devote our thoughts, our energies, and our resources towards the healing of typhoid fever, or towards prolonging life until the fever runs its course, yet how much more praiseworthy and humane would it be if we would but devote our efforts *collectively* towards its prevention.!

In conclusion, ladies and gentlemen, as this is a sanitary convention, let me remind you that "it is the mission of Hygiene to lessen the dangers which arise from aggregations of mankind," and that Bacteriology is the foundation on which modern hygiene must rest.

* Zeitschrift für Hygiene, 1893.

SHOULD MEASLES AND WHOOPING COUGH BE QUARANTINED?*

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Whether or not measles and whooping cough should be quarantined is a question of importance to children and one which vexes physicians, parents and school boards annually.

Quarantine on land, means the exclusion of the patient and his family from association with others during the continuance of the disease, when the infection is known to be communicable by a person in health from the sick to the well, and in diseases not so transmissible but only directly from one to another, in isolating the patient from contact with others.

These two diseases may be profitably considered together, the mortality being equal, or nearly so. Smith estimates that in New York City, covering a period of fifty years, there were 4840 deaths from whooping cough or one in seventy-six deaths from any cause.

The mortality of measles in London for one year was five for each ten thousand inhabitants; in England and Wales, one per cent. of all deaths were from this cause and nearly two per cent. in the large cities.

Statistics vary enough to be worthless, but the mortality rate

* Read at the State Sanitary Convention, held at Fort Collins October 1, 1897.

come within from three to fifteen per cent. of the cases reported, taking the cities of the nation as a whole where records are kept, and in the smaller towns and in the country where it doubtless falls to one per cent. or below it. Statistics in this connection are inaccurate chiefly because all cases occurring are not seen by a physician and not all of these are reported to the health officer; and, further, the gravest cases are all reported and upon this selected list the mortuary rate is necessarily based, so that practitioners in different localities and among those of different social surroundings will hold different views regarding the necessity for quarantine.

With the climatic and home environments of our Colorado children in mind, in my opinion the quarantine of measles and whooping cough is neither practicable nor necessary.

The contagion of both diseases is most virulent for several days before either disease can be diagnosed and it is during this period that children transmit them in school and at home, their symptoms being attributed to "a cold."

To the majority of families the luxuries of separate apartments and nurses are not attainable, even had the initial case been recognized in time to prevent infection of others, which practically never occurs. Once the child is convalescent and able to return to school the danger of again disseminating the contagion is at the minimum, for no one holds that the desquamation of measles is virulent and evidence is accumulating to prove that whooping cough is not contagious after the stage of whooping has developed.

I have personally known measles to sweep over a city school district of nearly 8,000 pupils notwithstanding the repeated persistent demands of the Health Commissioner, with the cordial co-operation of school principals and teachers, that all families in which it occurred should be quarantined, a part of which embraced the immediate dismissal of all children showing symptoms of "a bad cold."

The deaths numbered two in this epidemic, which swept a town of 40,000 people and the whole number reported to the health office was 124 for the twelve months including and following the outbreak of the epidemic, although the whole number of cases was estimated to be between 1,000 and 2,000.

With the best quarantine regulations we can enforce, it is possible only to delay, not prevent, the spread of epidemic measles.

Whooping cough is known in Japan as the "one hundred day" disease and the description would not be inaccurate in America. Think of what a one hundred day quarantine would mean to a child otherwise in health, except for paroxysms of coughing, and of the

inconvenience and expense entailed to its family, and the question again presents itself as one of expediency rather than one of practical sanitation.

The most enthusiastic supporter of rigorous quarantine of these diseases would exclude from school or the street all children from a family where they exist, whether protected by a previous attack or not. There seems to be no basis for such rigid care since little evidence has been adduced tending to establish the assumption that either disease is communicable through a third person.

Admitting, for the time, the accuracy of the mortuary statistics of these diseases in the cities of London and New York where in the former, it is said to be thirty per thousand each, in deaths occurring from all causes; and in the latter where whooping cough alone, for half a century caused one death out of every seventy-six dying, it should be remembered that three-fourths of all deaths in cities such as these, are of those under two years of age and that it is among infants that these diseases prove fatal by an overwhelming majority of cases.

This fact then, eliminates to a great degree the necessity for quarantine of children of school age the most urgent factor and the only one we will be consulted about as sanitarians.

If mortality statistics of these two diseases were available, including those between the ages of six and twenty years, only, in view of the previous authenticated statement that three-fourths of all deaths occur to those under two years of age, those caused by the diseases under discussion would appear as a fraction of one per cent.

Either disease, practically never terminates fatally to a healthy child receiving a modicum of care. It is true that either will prepare the system for the invasion of other diseases, notably pneumonia, tuberculosis and catarrhs of mucous membranes, but even this contingency is obviated by the care of a mother of average intelligence, except where these diseases are already incipient.

While no physician would willfully expose his child to either disease, for no sickness is a light matter, yet the fact confronts us that these diseases penetrate to the most inaccessible places; farms, logging camps and new mining towns, as well as to the secluded child in the city, to that extent indeed, that we are at times ready to believe them to be the result of atmospheric miasms, and the probability of a child reaching maturity, without being attacked by both, becomes a remote possibility only.

Adults enjoy great immunity from both diseases chiefly because of being protected by a previous attack in childhood, but

those isolated cases that do occur prove to us that the gravity of the affection increases proportionately with age after the fifteenth year.

We urge vaccination as a preventive against small pox, but we can not give a guarantee against this measure causing constitutional illness, yet the probabilities of an unvaccinated person contracting and dying from small pox is more remote than is death from either measles or pertussis.

I realize that the kindly disposed humanitarian will insist that the saving of one life justifies infinite expenditure of time, energy and money, which I admit to be true if the life be a valuable one and the means to that end are definitely directed. But, when only those are endangered whose tenure of life has already been prejudiced by inheritance or disease, and the effectiveness of methods devised for their protection is at best problematical, the expediency of unweildy isolation exactions for the benefit of such, may well be questioned.

To more purpose and immeasurably easier to accomplish, would be the quarantining of infants and weaklings, which could be done at a minimum expense at the mere suggestion of the family physician without loss of time at school or from business of those of the family who may later contract these diseases and who are abundantly able to withstand them.

It is easy to find an asylum among friends for a child in health, but next to impossible, for one having contagious disease. However there is no law permitting the quarantine of the well unless they have been exposed to contagion.

So long as the law of the greatest good to the greatest number obtains, communities, school officials and individuals will tactically conspire to defeat quarantine regulations directed against both measles and whooping cough, because of the irreparable loss of time to school children especially; to the end that attacks of these diseases may at most be deferred from childhood when careful nursing by the mother is possible, to adult life when contact with mixed communities renders infection inevitable and its type more severe.

I do not believe, that quarantine against either measles or whooping cough is practicable for the reasons that parents not only believe such police regulations unnecessary, but know them to be burdensome, out of proportion to the dangers incurred, and this knowledge is based upon the futility of attempting to escape from such epidemics and upon the low mortality of each.

I have never experienced opposition to quarantine of scarlatina

and the isolation of small pox is self adjusting. But so long as the dangers of measles and whooping cough lie in the constitutional unfitness of exceptional individuals to withstand them, or in the diseases which may complicate them, our efforts to enforce effective quarantine will be futile.

The Denver and Arapahoe Medical Society.

This report is original with this JOURNAL, and appears only in this Journal.

At the first November meeting of this society the following were present: Drs. Fenn, Eskridge, Graham, Jayne, Spivak, Warner, Ryan; Burns, Walker, Chase, P. D. Rothwell, Bane, Waxham, Howard, Munn, Grant, Denison, Fisk, Mitchell, Levy, Powers, Sheets, Freeman Beggs, Hill, Morris, McNaught, Hall, Whitney, Packard, Bell, Godfrey, W. J. Rothwell, Mussey, Hopkins, Zederbaum, Peavey, Love, Sewall, Blaine, Crews, Conroy, Raynor, Shollenberger, W. H. Davis, Roberts, Huffman and Axtell. A large number of senior medical students were also present.

Dr. Blaine, the Financial Secretary, jerked up the Board of Censors for passing on the names of men who had failed to deposit the initiation fee.

Dr. Mitchell read the first paper on the Typhoid Fever Symposium entitled "Vidal's Test." This paper we publish in full in this number.

Dr. W. J. Rothwell read a paper on "The Antiseptic Treatment," and Dr. H. B. Whitney on "The Woodbridge Treatment." Dr. Rothwell thought we had been acquiring a gradual immunity to typhoid. He reviewed the use of drugs in the trouble. Dr. Whitney had used Woodbridge's Treatment in quite a few cases and thought favorable of it but did not regard it as a specific.

Dr. Axtell reviewed the "Brand Bath" and presented a few temperature charts.

On discussion Dr. Tyler spoke of several cases with "Diazzo Reaction Negative," but with Vidal's Test positive.

Dr. Hall had twenty-five cases on the Brand Bath and had buried three and still had one in a bad way; of the three that died one died of haemorrhage; one died of haemorrhage and exhaustion; and one a German woman who died in three weeks of exhaustion. In one year he saw forty cases of typhoid without a death and the next year he saw eight cases with three deaths.

Dr. Munn said that up to the 20th of October, there had been seventy deaths from typhoid fever in Denver. In Berlin they have

twelve deaths from typhoid, in The Hague three, in New York twenty-four, in London sixteen, per year to a population of 160,000. He thought seventy was too many and in burning words said he thought it ought to cease. Denver's water supply was at fault.

Dr. W. J. Rothwell thought the Brand Treatment does not reach the root of the matter. Bathing strikes at the results of infection, not at the disease. He was not an advocate of using any exclusive method. He had not lost any cases of typhoid, but would not hesitate a second to use the Brand Bath if he thought it would be of service.

Dr. P. D. Rothwell did not like such a treatment as Woodbridge had presented. It was too much like a proprietary remedy, to be handled by every druggist. He had treated typhoid for sixteen years, and had lost but three cases, and he had never treated two persons the same way. He did not intend to use the Brand Bath. Would not allow it used on himself. Could not see how water outside can affect the bacillus within.

Dr. Fisk has always been interested in typhoid. He thought the advice to get the upper hand of the case early was well taken. He did not believe in treating cases to death. He gives calomel early and follows it by castor oil. Occasionally gets too much of a diarrhoea, but does good in most cases. He called attention to Vidal's Test, and spoke of a patient with pain in Riliac region, in which Vidal's Test was positive, yet the disease was apparently not typhoid. He spoke of the test being found positive in other diseases than typhoid, as peritonitis and pneumonia.

Dr. McLauthlin thought we ought not to forget the value of food and nursing in this disease. He thought we ought to be under obligations to those who hold radical medical ideas as to the treatment of typhoid. Personally he believed in the great value of bathing in this fever.

Dr. Beggs spoke of the diagnosis being the first essential to proper treatment. Osler thinks typhoid is typical: "I know that in certain sections typhoid fever is not typical. In treatment I favor intestinal antiseptics. Woodbridge begins his treatment at any stage. He permits his patients to eat beefsteak. Tyson thinks intestinal antiseptics has no rational basis for employment."

Dr. Mitchell thought intestinal antiseptics directed to killing germs in the intestines was irrational. How it could reach germs in the spleen and mesenteric glands he could not understand.

Dr. Whitney spoke a word for medical men not to be overpositive in their assertion against the Brand Bath in family practice. He did not think it right for physicians to shrug their shoulders when asked about this treatment.

Dr. Axtell thought the Brand Bath ought to be employed early. He had employed bichloride of mercury once upon a time and had liked it, but it was irrational. He thought that if chemical and microscopical analysis had proven the bath to be followed by increased oxidation and increased leucocytosis that it was a rational treatment, for it is upon such factors that we have to depend.

Dr. Hall presented a photograph showing how to demonstrate to a student a tumor or the edge of the spleen or liver. By getting the mass under the hand and then spreading the fingers and letting the student put his fingers in the spaces, a careful examination could be made.

Dr. Blaine, the Financial Secretary, presented his report of delinquents. It was moved that the reading of the report be postponed to the first week in January.

Dr. Graham moved that a committee of five be appointed to look after increasing the membership of the Association.

The Financial Secretary was by motion empowered to employ a collector.

Dr. Grant offered a resolution to the effect that inasmuch as Mr. John C. Dana would probably leave the Public Library to accept a position in the east, that the School Board of the county be solicited to retain Mr. Dana if possible. He eulogized Mr. Dana for his efficient work in The Colorado Medical Library Association. The resolution was accepted and a committee of three consisting of Drs. Grant, Munn and Sewall, were asked to visit the School Board and press this matter.

Dr. Spivak called attention to the fact that papers which had been read before the Society had been published without due credit being given the Society.

Adjournment was taken at 10:45.

Denver Clinical and Pathological Society.

This report appears exclusively in this Journal each month.

The first meeting of this society, after its summer vacation, was held October 15, in the offices of Drs. Hall and Hopkins; Drs. Leonard Freeman and Wetherill assisting.

The membership committee reported the death of Dr. Mager.

The newly elected officers were, Dr. C. K. Fleming, President; Dr. G. M. Black, 1st Vice President; Dr. Alfred Mann, 2nd Vice President; Dr. Lewis M. Walker, Secretary; Dr. Leonard Freeman, Treasurer; Drs. Wetherill, Waxham and Hopkins compose the

executive committee and the membership committee is Drs. Blaine, Hershey and Lewis M. Walker.

The treasurer's report was read and accepted as was the secretary's, also. This we will publish next month.

The guests of the evening were Mr. Hunter, of the Hunter Drug Co., and Drs. Raynor, Beggs, Warren, Fenn, Williams and Stover.

Dr. Le Mond reported a case in which an old man presented himself with a pterygium upon each eye and who complained of loss of sight. Upon examination it was found that both eyes were affected with choroiditis and with a deposit of coloring matter in the vitreous of both eyes. The case was diagnosed tertiary syphilis and large doses of iodide of potash were given, with injunctions of yellow oxide of mercury for the eyes. Improvement was very good.

Dr. Leonard Freeman reported, with exhibition of specimen, a case of a man 30 years old with a retained testicle, in the lumen of the inguinal canal. On operation it was found that a kidney presented itself in front of the testicle. Both were removed the lumen reduced and the canal closed.

Dr. Mann reported a case of persistent headache in a young woman. There was no history of syphilis but headaches disappeared under specific treatment and returned when treatment was interrupted. Discussion brought about the decision that Dr. Mann was justified in ascribing the cause to syphilis.

Dr. Levy reported a case of a young woman 30 years of age, single, who presented a painful collection of sores in the mouth and pharynx. They resembled mucous patches. Dr. Levy thought it to be either stomatitis or syphilis. Pulse and temperature were normal.

Dr. McNaught reported an operation he made upon a protuberance upon the forehead. Two years later he operated the same person for protuberance upon the left side, about the third rib. The operation showed the rib to be eaten through. Lately the same patient appeared with the same condition of one of the floating ribs of the right side and it was found partly eaten through. Iodide of potash and mercury were given in large doses at intervals during this time.

Dr. Hall exhibited a case of a child four years of age with transposed viscera. A mitral disease was present due to repeated attacks of rheumatism. Dr. Stover reported a fluoroscopic examination of the child.

Dr. Black reported a case of a woman in whose mouth were found mucous patches and in whom sores were found upon the labia

majora. The husband presented no symptoms of syphilis. The case was finally traced back to an examination made two months previous by a physician in Dallas, Texas. The primary sore made its appearance in three weeks from that time. A sore was later discovered under the husband's lip.

Dr. Pershing reported two cases of tetanus. The first was a boy 16 years old who had been feeling poorly for some weeks. Eight days before seeing the case, the boy was struck by a cable car but there was no wound. The case was diagnosed as functional and later an abscess was discovered behind the right tonsil. A good recovery was made. The second case was of a boy who stepped on a nail. Fourteen days later he first complained of pain in the jaw. The next morning he couldn't open his jaws and from that time the symptoms rapidly appeared. Heavy doses of chloral and some bromide were given and the wound in the foot was opened, the scar tissue cut out and the cut thoroughly disinfected. General tetanic spasms appeared the next day. In twenty-four hours full doses of antitoxin were given with general alleviation of symptoms. The urine from the start had been scanty, but on the ninth day there was almost a suppression of it and he died.

Dr. Axtell reported a case of typhoid fever in which the symptoms were typhoid in which both the Diazzo and the serum test made on different occasions resulted negatively.

Dr. Walker reported a case of death due to uremic poisoning, in a man 48 years old, who had had malaria from early childhood. The liver, spleen and prostate gland were all enlarged. There could be obtained no history of kidney trouble and the patient presented no symptoms directly tracable to the kidneys until nineteen hours before death when his urine was suppressed and filled with albumin.

The society then adjourned to a lunch.

News Items.

The JOURNAL congratulates Dr. and Mrs. E. H. Fish of Ouray, on the happy advent of a son into their family, recently.

Dr. Leonard Freeman recently took a vacation in his old home in Cincinnati, leaving Mrs. Freeman there for a protracted visit.

Dr. and Mrs. H. T. Pershing are receiving congratulations from their friends over the recent arrival of a boy baby at their home.

Dr. J. W. Exline has removed from Denver to Black Hawk,

Colo., where he has found himself in the midst of a lively practice.

Dr. E. C. Kimball, the pioneer physician of Colorado Springs, died in that city, October 28, after forty-five years of active practice in his profession.

Dr. Clarence Arnold, one of the alumni of the Denver Medical College, came up from his home in Colorado Springs and visited in Denver for a few of the early November days.

Dr. M. H. Mack of Denver, is now in London taking post graduate work in Diseases of the Rectum. He has left his office in Denver in the care of Dr. Tevis, formerly of Victor.

Dr. James Miur was in Denver for a few days this month preparatory to fitting up his new offices in Colorado Springs, where he has limited his practice to eye, ear, nose and throat.

Dr. B. B. Creighton, of Manitou, had a serious accident befall him recently, while coasting on his bicycle. He ran into an obstruction and was thrown violently to the ground, rendering him unconscious for a time.

Dr. P. T. Rucker has left Denver to locate permanently in Central City. He goes to take the practice of Dr. Bonesteel, who has gone to St. Louis to locate, in addition to his work as local surgeon for the Denver & Gulf railroad, which appointment Dr. Rucker has recently received.

"*Matthew's Quarterly*" in an enterprising manner is getting up a popular excursion to Denver next June. It is to be conducted on generous lines. We commend their enterprise and wish them every success. We want every soul that can come, to be with us and get a whiff of ozone right off the mountain top.

Dr. Charlotte Hawk, who is now enjoying a good practice at Green River, Wyo., was in Denver, the first of the month, and along with attending to business affairs, called on some of her old friends in the profession. Dr. Hawk is the only lady physician in that district and has some very novel experiences to relate.

The *Western Medical Gazette* has made its debut into the field of medical journalism with Drs. W. H. Beggs and Lincoln Mussey to look after its interests. It is a Denver publication, but the character of its contributions will not be confined to this locality. Its initial appearance is attractive and entertaining, and we hope for it the success its promoters anticipate.

We have one of Dr. Rosenthal's stock letters to members of the Pediatric Section of the American Medical Association the con-

cluding paragraph of which reads: "Denver seems far away, but in reality, the journey is a pleasant one; there will be reduced railroad fares, and the opportunity is excellent for seeing, in pleasant company, the magnificent Rocky Mountain region."

A change has been made in the management of the finances of the State Medical Board whereby the Board, hereafter, will pay into the state treasury all money collected and the expenses of the board will be paid from the state contingent fund. The former method of the Board paying its own expenses out of the fees collected, was decided to be not in accordance with the law.

Dr. Munn, City Health Officer, has been having trouble of late with some of the foreign element of Denver, regarding quarantine regulations. Either on account of ignorance of the English language or "pure cussedness," they disregard any precautions for the spread of disease, and mingle throughout the town with scarlet fever and diphtheria present in their homes, or even take their children in the desquamative stage of scarlet fever through the streets.

The first horseless carriage has come to Denver! It came in after dark one day, but drawn by Drs. Leonard Freeman, Hall and Raynor, who went hunting the evening before in the same carriage drawn by a horse. They camped ten miles out of Denver, but while they slumbered and slept, the horse *decamped*. Getting back to town the doctors pulled double and the third man did the pushing. Each mile travelled seemed to stretch out like the rays of the setting sun, and had it not been for a "lift" which some good Samaritan gave them who passed that way with a team, the arrival of the horseless carriage in Denver would not yet be.

Dr. C. E. Tennant, Sr., who has practiced medicine for several years past in Denver, died at his home on Curtis St., Thursday, Nov. 4. He was a member of the faculty of the Homeopathic Medical College in this city, and took an active part in the meetings of the Homeopathic Club. He was a surgeon in the late war, the exposures of which left him in ill health from which he never entirely recovered, although diabetes was the immediate cause of his death. He was a man extremely liberal in his views pertaining to life and was in every sense of the word an *honest* man, whose genial presence will be sorely missed by those who knew him.

During the month reprints have been received from Drs. Pershing, Black and Rogers, for which the JOURNAL wishes to say "thank you."

THE COLORADO MEDICAL JOURNAL.

SUCCESSOR TO
THE COLORADO CLIMATOLOGIST AND DENVER MEDICAL NEWS.

A Monthly Journal for the Medical Practitioners of Colorado and Adjoining States.

EDWIN R. AXTELL, M. D., EDITOR.

E. A. SHEETS, M. D., MANAGER.

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VOL. III.

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NO. II.

Editorial.

A Remedy for the Dispensary Abuse.

The dispensaries connected with our medical schools are doing good work this year and we believe are doing it within their legitimate field. No pains should be spared to limit the dispensary privileges to those who are worthy of them, and we believe that the effort to do this is being made now more than ever before.

The dispensary of the Gross Medical College and that of the University of Denver are widely separated from each other; each is however so situated that it is accessible for such persons as must resort to it, and there is no good reason why each should not have all the material it needs for teaching purposes and yet confine itself strictly to its legitimate field. A wide deviation from the true field of dispensary work will bring down a storm of condemnation upon the transgressor and deprive the dispensary, and the medical school with which it is connected, of that support and co-operation it otherwise has a right to expect from the medical men of the city.

The poor can receive at these dispensaries the services of skillful physicians and can compensate for the services so rendered by serving as object lessons for the students. The value of this kind of object teaching is being more and more appreciated and medical

schools feel the necessity for constantly increasing their facilities for clinical instruction.

To this end The University of Denver has fitted up in the first floor of the college building, at 14th and Arapahoe Streets, a most complete suite of rooms for dispensary and clinical purposes, and is rapidly building up a dispensary service which should afford this school all the clinical material it can advantageously employ; it is at the same time making strenuous efforts to keep well within the legitimate field of dispensary work, and we believe it is succeeding.

The dispensary of the Gross Medical School is so situated that it is well attended by a class of patients who are most deserving of dispensary privileges.

These dispensaries should receive the support of the physicians; they can and should aid this work by sending those who apply to them, and who are unable to pay a fee, to the dispensaries for treatment, while with the true spirit of reciprocity the dispensaries must turn away those who are able to pay.

We are authorized to say for the University of Denver that indigent patients will be treated free of cost at eleven o'clock daily, and that physicians are asked to send such patients as they may deem worthy, to the dispensary with a card or note indicating from whom they come. If this plan can be carried out it will throw a double safeguard about the dispensary service, making it far easier to settle the question of fitness for treatment, as the physician will in all probability have much better facilities for determining the financial standing of the applicant than the director of the dispensary could possibly have.

The real solution of "the dispensary abuse" problem lies along these lines of reciprocity and co-operation. Do your part and the dispensaries will do theirs; indeed they will not need to trespass upon your territory.

H. G. WETHERILL.

† † †

Medical Expert Testimony in the Luetgert Case.

In conversation recently with a "Philadelphia lawyer," who was once a prominent member of the Pennsylvania bar, the writer was informed that the value of so-called expert testimony, to the side presenting it, lay in the positiveness with which the witness asserted his qualifications and his opinions. Illustrating this point he cited the case of a physician called to give expert testimony upon a certain subject, who upon being asked whether he possessed special knowledge of the scientific matters in dispute, boldly replied: "I have given special attention to this subject and probably know more about it than any other man in the world." The

manifest egotism and falsity of this reply (for the witness had no scientific reputation and no better qualifications for expert knowledge than a loud voice and an impervious conscience) did not detract from the weight of his testimony.

In reading the published reports of the "expert" testimony in the Luetgert case, one can hardly fail to be impressed with the positiveness with which assertions are made upon subjects that have heretofore been held to be impossible of positive determination. Perhaps Chicago "science" has settled all the mooted questions and removed all possibilities of human error in regard to matters automatic.

One of the surprises of the testimony has been the sworn statement that from the inspection of a piece of the head of a femur a certain professor was able to determine at a glance not only the side of the body from which it came but also that it had been a part of a female body. A similar statement was also made in regard to a mutilated fragment of a temporal bone.

Professors of anatomy in medical colleges have from time immemorial taught that with both perfect femurs in evidence a *probable* statement of sex of the body from which they were derived might be given; that with the pelvis in evidence there could hardly be any reasonable doubt as to the sex of the body from which it was taken, but that even for the formulation of these opinions with any exactness a study of the whole bones and of their angular relations to each other was necessary. But it has remained for the experts in 'his case to dazzle the anatomic world with the positive assurance that the sex of a body can be exactly determined,—beyond possibility of dispute,—by the examination of a fragment (partially destroyed by strong alkalis) of the head of a single femur. The expert is so sure of this hitherto unannounced discovery that he is willing to assist in hanging a fellow-man upon an opinion that has no better basis. We have little hesitation in saying that a majority of surgeons and anatomists will not accept this late discovery, nor will conscientious physicians who are from time to time called to the witness stand in law suits feel that their standing has been improved by the almost baseless evidence of such "experts."

Mr. Leutgert of Chicago, may or may not be guilty of the murder of his wife. But if he is to be hung it ought not to be upon testimony of the character that has been presented as "expert" by the prosecution.

All of this testimony has been presented for the purpose of proving the existence of a dead body, technically, "the corpus de-

licti." It may not be uninteresting to recite a few cases where the evidence seemed quite sufficient, in which subsequent developments proved that the supposed dead person was still alive.

Ogston's Medical Jurisprudence, page 66, (quoted by Tidy) recites the case of a medical student in whose possession a dead body was found and who thereupon was accused of murdering a man who had disappeared some time before. The relatives of the missing man positively identified the body as that of their friend. The medical student then confessed that the body was that of another person and had been stolen from its grave for dissection. The grave was found to be empty, but notwithstanding this fact the relatives of the missing man still persisted in identifying the body as that of their relative and offered to make oath to that effect. Subsequently the missing man re-appeared and the medical student was saved from conviction.

In another instance, near Dover, England, in 1875, the mangled body of a man was discovered and positively identified by the wife, son and employer of a missing man. Just as the funeral services began the real missing man made his appearance. Further investigation was thus forestalled.

Dr. Kinloch reported in the *Edinburgh Monthly Journal* in 1854 the case in which the body of an old man, found on the river bank was identified by two women as that of their father, especial weight being attached to the loss of the left ear and left forefinger, which had occurred years before. The body was interred but upon returning home from the funeral the women found their father in the house in good health and his absence was satisfactorily explained. The true identity of the dead body was never discussed.

Such cases as are here cited assume importance in view of the claim of the defense that Mrs. Luetgert is not dead but has either wilfully, or while insane, disappeared. Such things have happened before; they might occur again. And yet it is proposed to hang the defendant, not only without any proof of *the* corpus delicti but upon such shadowy testimony as to *a* corpus delicti.

The abuse of expert testimony could not go further than it is sought to make it reach in this case. Medical testimony by conscientious and well informed men has its proper place; medical experts who are genuine are entitled to professional, judicial and public respect; but the so-called "expert" testimony for the prosecution in this trial will, if not disclaimed, bring further contempt upon all experts.

W. P. MUNN.

The Ladies and the American Medical Association.

I have always known Dr. Axtell to hit the nail on the head, but he certainly took me by surprise when he asked me to write an article for the COLORADO MEDICAL JOURNAL suggesting ways and means how to entertain the distinguished guests who will honor us with their visit next June. I am a resident of Denver for eighteen months, and not only am I unacquainted with the scenery and places of enjoyment in Colorado, but most of the physicians wives are entire strangers to me, so that I find the task assigned to me a truly hard one. Thanks, however, to Mrs. Axtell's excellent account (COLORADO MEDICAL JOURNAL) of how the Philadelphia ladies entertained their visitors during the last convention, my difficult situation has been somewhat relieved. While reading this article the only logical idea that occurred to my mind was that in order to be able to meet the responsibilities which every one of us individually is willing to share we must unite and concentrate our efforts by means of a permanent organization.

The American Medical Association is going to hold its meeting for three long days, during which time the wise men will expound the obscure ways of the different bacilli, how their activity is manifested in human flesh, how the moods of a person change when the microbe is eating, sleeping, drinking, dancing, marrying, propagating, etc. All the various pranks of the coci are tiresome pastimes for the Esculapius' mates to endure. Their trip to Colorado, unlike that of their husbands', aims at no scientific research. They seek recreation and pleasure, pure and simple. We, therefore, physicians' wives, must try and make their sojourn here as pleasant as possible, and I suggest that Mrs. Graham, who is not less active than her husband and is in perfect sympathy with him, in order that our next reunion should be in every way a success, to take the lead, (and other prominent ladies, Mesdames Bancroft, Stedman, Rogers, Parkhill, Nichols, Whitney, Black, Wetherill, Bonney, Hawkins, Lemen, Axtell, Craig, and Mrs. Fisk, if there be one) to bring all the physicians' wives together and form a permanent organization for the purpose of entertaining our much expected sisters. After we are organized we can appeal, if necessary to the different ladies clubs to associate with us.

When the different bodies of physicians held their meetings in Europe, the royal families took part in entertaining the patriarchs of science. I hope that in the democratic state of Colorado, where the women so fearlessly handle the ballot box, so boldly solicit votes at the doors of the inhabitants, and where they even don the

garb of lawmakers, surely they will give to the wives of their life-savers more than a royal welcome. MRS. C. D. SPIVAK.

† † †

A Souvenir to the Ladies Visiting Denver at the Convention of the American Medical Association, From the Physicians' Wives of Colorado.

Knowing something about the ladies of Denver in general and the physicians' wives in particular, I do not doubt for a moment that the suggestion made elsewhere by Mrs. Spivak will at once be realized and a permanent organization effected. Taking this for granted, I take the liberty to suggest that a committee be appointed for the purpose of preparing a suitable souvenir. But it must not be of the cut and dried order. It makes one sick to see beautiful paper and exquisite binding spoiled by the vapid and stale contents with which the usual souvenir abounds. It should be something that will reflect the taste and intelligence of the women of Colorado.

A souvenir must possess the following attributes: 1. It should be a thing of beauty, a joy forever. 2. It should embody an original idea. 3. Should be a contribution to art or to literature.

A souvenir possessing the above attributes will be of permanent value, it will be preserved by the possessor, and in it will be forever mirrored those who made it.

I suggest that the souvenir which would befit the dignity and intelligence of both givers and recipients, should consist of a collection of types of physicians' wives, culled from the wide field of English literature. There are hundreds of such types scattered here and there in the works of our best representatives of fiction, both standard and modern. They need only be collected and arranged. This is no one man's work. This should be done by the *women of Colorado*. Co-operation is necessary, especially in view of the fact that the time is short.

The plan of the work is as follows: There should be appointed an editorial committee of ladies under the guidance of such an accomplished man as Mr. J. C. Dana, the librarian of the Public Library. The work should be divided as follows: each lady is to be assigned one author, say Disraeli, Howells, Cable or Elliot, etc. She is to peruse carefully the works of the author, and if she finds there the type of a physician's wife, she is to make a suitable quotation which would characterize the person. She notes the name of the book, the page and the publisher. If one quotation is not sufficient, she is at liberty to make as many as she wishes, or she can make a resume of the character. Such contribution is to be credited to her who will make them.

If the physicians' wives find the task too great for them to carry out alone, they can appeal to the various literary Women's Clubs, who will, I am sure, readily and gladly take up the work, and vie with each other in excellence and thoroughness. The teachers of the public schools will also lend a helping hand.

When a lady has performed her assigned task, she sends in her contribution to the editorial committee, which will revise and arrange the matter for publication, and after the whole domain of English fiction will have been gone over carefully and systematically, the work is accomplished.

Let me give a few examples:

Charles Dickens. Mrs. Marigold in Dr. Marigold's Prescriptions. Christmas Stories. Page 427-428. Example of quotation:

"She wasn't a bad wife, but she had a temper. If she could have parted with that one article at a sacrifice, I wouldn't have swopped her away in exchange for any other woman in England. Not that I ever did swop her away, for we lived together till she died, and that was thirteen years. Now, my lords and ladies and gentlefolks all, I'll let you into a secret, though you won't believe it. Thirteen years of temper in a palace would try the worst of you, but thirteen years of temper in a cart would try the best of you. You are kept so very close to it in a cart, you see. There's thousands of couples among you getting on like sweet ile upon a whetstone in houses five and six pairs of stairs high, that would go to a divorce court in a cart. Whether the jolting makes it worse, I don't undertake to decide; but in a cart it does come home to you, and stick to you. Violence in a cart is so violent, and aggravation in a cart is so aggravating.

We might have had such a pleasant life! A roomy cart, with the large goods hung outside, and the bed slung underneath it when on the road, an iron pot and a kettle, a fire place for cold weather, a chimney for the smoke, a hanging shelf and a cupboard, a dog and a horse, what more do you want? You draw off upon a bit of turf in a green lane or by the roadside; you hobble your old horse, and turn him grazing; you light a fire upon the ashes of the last visitors; you cook your stew; and you wouldn't call the Emperor of France your father. But have a temper in a cart, flinging language and the hardest goods in stock at you; and what are you then? Put a name to your feelings.

My dog knew as well when she was on the turn as I did. Before she broke out he would give a howl and a bolt. How he knew it was a mystery to me; but the sure and certain knowledge of it would wake him up out of his soundest sleep, and he would give a howl and bolt. At such times I wished I was him."

Esther Summerson in Bleak House. Chapters 3, 6, 8, 9, 13, 15, 17, 19, 23, 24, 29, 31, 35, 38, 43, 45, 47, 53, 54, 56, 57, 59, 65, 67.

Example of resume.

Wife of Allan Woodcourt, Surgeon. Is represented as a prudent, wise little body, a notable housewife, a self-denying friend, a universal favorite.

Sir Walter Scott. Mrs. Gray in Surgeon's Daughter. Page 33, 45.

"For Mrs. Gray in general tractable and good humored, could sometimes perform the light part in a matrimonial duet."*

Thus the Denver women, working in harmony and co-opera-

* The above quotations were kindly made for me by Miss Nora B. Freelove.

tively will produce a monumental work which will be a real contribution to literature and redound to their glory. Those who will carry away with them this souvenir, from the physician's wives to the physician's wives about physician's wives, will carry with it the sweetest remembrance of, and the highest regards for those who presented it to them.

C. D. SPIVAK.

† † †

The Physician's Stony Road.

Prof. W. C. Alpers, in the *Rocky Mountain Druggist* has, in a bright article on "Evolution in Pharmacy" the following to say on the dispensing of medicine by physicians:

"Let us not forget that the physician, too, walks a stony road, and that the couch of roses, on which many a pharmacist imagines him to rest, is full of thorns. If the department store steals the pharmacist's customer, the free dispensary allures patients from the physician. Something must be done in both cases, to recover the loss. The pharmacist has his attractive store, with its variety of goods, and in reckless despair adds low prices to many other temptations; the physician can find but one means of special attraction to his patients—the free dispensing of medicine. Both may herein be proceeding from fallacious premises; and thus their action, far from abolishing their ills, must, in its ultimate results, only increase them. But there is at least in the beginning, a deceptive semblance of a turn for the better."

† † †

The American Medical Association.

Like a slumbering giant, this Association is at rest, with only an occasional sound of life, but there beats in every part a mighty pulse and hundreds of cells are working through the sleeping hours smoothing out the brawn and strength for a mighty awakening.

The section of medicine has pledged of papers from a hundred intellectual leaders. The section of surgery has gotten down to hard work and is stirring up things on every hand—and thus it goes throughout the breadth and width of the land. Everywhere men are putting forth their best energy to add something to the coming meeting of this mighty Association. Here in Denver, meeting after meeting is arranged, for the discussion of the million of details that come up all the time. Committees getting together, runners here and there and all of us getting a shade more enthused. The meeting must be a success. Every Colorado man says that. Not a thing must hitch. Nothing but success must be the cry. An early move must be to get all the western forces straight in line.

The giant slumbers, but the pulse is steady.

MONTHLY BULLETIN OF THE COLORADO MEDICAL LIBRARY ASSOCIATION.

T. H. HAWKINS, M. D., President.
LAURA LIEBHARDT, M. D., Treasurer.

HENRY SEWALL, M. D., Secretary
J. C. DANA, Librarian.

NO. 3. NOVEMBER, 1897.

In looking over the names of visitors upon the register book in the library, I find that the medical students of both colleges avail themselves of the opportunities which the library offers. This reflects credit upon the faculties of the colleges as well as upon the stuff the students are made of. The students no longer content themselves with studying their prescribed books, they snap now and then an hour and consult other works in the various branches with which they supplement their knowledge.

What has become of the suggestion of Dr. Leonard Freeman, that the students of both colleges be charged a nominal fee for attending the clinical lectures of the County Hospital, which in turn should go to the Colorado Medical Library Association? Suppose, we leave the matter to the students to decide what should be the fee. I am sure they will willingly contribute one dollar yearly if they know that it goes to the library which they use. The secretary of the library will see to it that every penny that comes from the students will be spent on text books only. The staff of the County Hospital ought to consider this matter.

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This is a nice crowd of people. It needs only swelling. It is expected that by January 1898 the century mark will have been passed.

C. D. SPIVAK.

Book Reviews.

MANUAL OF GYNECOLOGY.—By Henry T. Byford, M. D. Second Edition. P. Blakiston, Son & Co., Philadelphia, Publishers.

This book of nearly six hundred pages has many features which will commend it to teachers of gynecology, and which make it a desirable text book for undergraduate students of medicine.

It is well written, comprehensive, amply illustrated, and everywhere shows the effect of the large experience of its author, for it is full of practical and valuable suggestions which only one with a large working knowledge of the subject could give.

The general plan of the book is a good one, part of it will not however be approved by those who believe that a well grounded knowledge of the anatomy and physiology of the female genital organs should be the foundation upon which gynecological diagnosis and treatment must be based. The author's reasons, as given in the preface, do not seem sufficient justification for placing the chapter upon "Diagnosis and Treatment" before that upon "Anatomy" and there can be little doubt that most teachers of the subject would prefer that the transposition had not been made. The marginal notes as a guide to the important points of the text should facilitate work with the book for the undergraduate, and the busy practitioner. The paper, typographical work and binding are good.

Some inaccuracies have found their way into the volume, but they are mostly of a kind which would be quickly seen, and recognized as such, though in a text book for students they are peculiarly unfortunate. Thus on page 93, the middle layer of the uterine muscle is said to be "made up largely of longitudinal fibres," and in the last line of the same page the "epigastric" artery is alluded to when it is clear that the "spermatic" is meant. It is not stated just why the author prefers the name "spermatic" for this vessel in the female, when most others give it the name "ovarian," the latter name describing so well its distribution and position. The principle contended for some years ago by Joseph Leidy and others should certainly be followed by the makers of text books at the present day, i. e., all anatomical names should be simplified, anglicized and, so far as is possible, made descriptive of the part named.

It is easy to conceive of there being a great demand for just such a text book as this is when all its little defects are eradicated.

H. G. W.

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ANIMAL DISEASES COMMUNICABLE TO MAN.*

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Denver, Colo.

Although the duties of the official Veterinarian are to a great extent specialized to the prevention of the spread of animal diseases one to another, and to the curtailment of monetary losses thereby occasioned, we cannot get away from the important facts established from the necessary study of comparative pathology, that animal diseases are often dependent upon the same causes as those of man, and that the same principles apply to their cure and prevention. Further, that as we approach in animals more nearly to the physiological structure of man, and to the conditions of his life and development, we likewise approach more nearly his pathological alterations; and so near at times do these approaches occur, that we encounter diseases not only of identical character, but capable of being actually communicated from one to the other.

It is unfortunately true that the differentiation of animal life is generally so marked, as to cause an equal differentiation in the specific disease germs of each type of animal, and also in the lesions caused thereby, and this to such an extent as to cause a peculiar immunity in one animal to the destructive and fatal diseases of another. While this is generally true, yet we still have instances of destructive disease germs common to a majority of warm blooded animals, and several common to man, and one or more of the lower animals. I take it that it is the object of this short paper to more particularly allude to this distinctive class of disease, directly communicable, or having a common cause.

*Read before the Sanitary Convention at Fort Collins, Oct. 1897.

Before entering into a description of these diseases, and in order to better understand the reason for their connection, it will be as well to allude to the general principles of the occurrence of disease, as elucidated by the study of comparative pathology.

I take it that all disease may be defined as an imperfect adaptation to surrounding conditions of nutritive plasma, whether this be caused by processes of imperfect organic action within the individual, or from the introduction of an excess of living or dead poisons from without. Life itself in the higher organisms may be stated to be the successful resistance of a harmonious set of independent organs to the destructive effects of separate living individualities having no cohesive qualities. Disease is simply a lesser degree of successful resistance, resulting in either the victory of the higher complex organism, or of the lower individualities. The conditions tending to the victory of the former are commonly termed healthy or sanitary; and that of the latter, unhealthy or unsanitary.

Comparative pathology illustrates in all animals these main truths: that a healthy complex life is constantly at war with lower forms of life, and in direct proportion to its complexity has it always acquired a greater resisting power to the attacks of lower forms. Thus, as we descend in the scale of animal life from man downwards, we always find the resisting power to disease less, the duration of the fight against sickness less, and the pathological processes much quicker. This is true of inflammatory action, formation of tumours, course of fevers, and even of the ordinary processes of nutrition. To a great extent this accounts for the fact, that the majority of the specific fevers of one class of animals is not communicable to another, because the resisting power of the more complex and higher organized animal has been educated to cope successfully with those disease-producing agencies fatal or harmful to the lower organism. Some destructive agencies, however, are so potent, perchance by long acquired virulence through favorable evolution, that they retain their characteristics of virulence among many classes of animals, notably in the case of glanders and anthrax; and some higher organisms retain common weaknesses of resistance through similar retrogressions in the true principles of healthy evolution as to make them common victims of the same disease factor, of which tuberculosis is a good example. In sanitation, the fact must never be lost sight of, that it takes two causes to produce disease, the production within, or the successful introduction from without, of the potential agent, and an absence of those natural or acquired resisting qualities common to all life. It is true that we meet all kinds of gradations of potency in the active cause,

and likewise many variations of resistance, resulting in the comparatively rare but virulent typhus and anthrax resisted by the few, and the more common tuberculosis resisted by the many. Were the germs of anthrax and typhus as common as those of tuberculosis animal life would be extinct in a few months, and were those of tuberculosis as rare as those of typhus, consumption would scarcely ever be encountered. Measures to increase the resisting powers to the attacks of disease agencies are equally as important as the destruction of the active agent itself, and the study of disease as it occurs in all life strongly corroborates this position. In many animal plagues of great extent, this resisting power acquired through several generations, in special localities, has amounted to immunity, notably in the rinderpest of Russia, and in the splenic fever of cattle of the southern states of this country, and in man too, we have similar instances in the immunity of certain natives to yellow fever, and the gradual lessening of the virulence of syphilis among many civilized nations.

The study of the disease of animals is important to all sanitarians, not only for the interest to be taken in the direct transmission of disease, but also in the study of those well-known factors of immunity so commonly observed. The factors of immunity in the lower animal may possibly in many instances be discovered, isolated, and used, for the prevention of the same or similar disease in the higher. It is not improbable that the required immunity of swine under certain conditions to hog cholera (so similar to typhoid fever of man) may be utilized to minimise the attacks of this troublesome fever of man; the acquired immunity of southern cattle to splenic fever (so like in its manifestations to yellow fever of man) may be utilized for its repression; and the same may be said of the rinderpest of cattle and typhus fever of man.

The most common of the diseases referred to above as being communicable directly from the lower animals to man, and having a common direct cause in man and animals, are glanders, anthrax, rabies, tapeworm, trichinosis, ringworm, actinomycosis, and other parasitic diseases; and finally tuberculosis, upon all of which I will touch briefly in the order above written.

Glanders.—This is one the earliest diseases recognized and accurately described in history, and one which through ages has most retained unaltered, its specific effects. Its communicability from horses to man was recognized more than 2000 years ago, and the glanders of that day, according to the description of old writers, is the glanders of to-day.

Attempts have been made by some recent writers to prove that

a modified form of this disease can exist on our western ranges, and that under the influence of a dry ozone-carrying atmosphere, recoveries have taken place in the horse. These facts have not been satisfactorily established, and the only difference I have noticed in Colorado is the less amount of pulmonary glander infection, and the consequent greater restriction of the disease to the mucous membranes of the air passages, and necessarily less quickly fatal results.

This disease is associated with a specific germ more particularly found in the neoplasms of connective tissues, the schneiderian membrane and in the various lymphatic glands of the system.

In its chancrous indurated ulcers of mucous membranes, its induration (with very rare suppuration) of lymphatics, and its gradual but slow attack of the lungs and other important organs, it greatly resembles syphilis of man.

It is communicable to man and almost all other animals except the ruminants, which latter are peculiarly proof against this infection.

It is a strictly contagious disease and spreads from one animal to another by actual contact of the diseased products with the sensitive membranes. It cannot be conveyed by the breath, or by volatile excreta.

It exists in animals in an acute and chronic form, but in man generally in the acute, although there have been rare instances of local infection only. In the acute form the disease is rapidly fatal in all animals in a few days; in the chronic form it may last for years; and in many cases the visible lesions disappear and the disease becomes difficult to detect.

Reaction to the hypodermic injection of the toxin, prepared by artificial cultivation of the glanders germ, is an almost sure indication of the disease however obscure.

This material, called "Mallein," however, has no bad effect upon healthy animals. It is now being tested as a remedy, but so far with doubtful results.

From a sanitary point of view, a cure for glanders is neither expected nor looked for, it being more expedient and economical to destroy all affected cases, with the hope that by so doing we may gradually, (at any rate in certain sections of the country), get absolutely rid of the disease. No possible known set of conditions, even after repeated experiments, has ever produced *de novo* a case of glanders. Thousands of years of evolution of this pathogenic germ must have so differentiated it, as to render it individual and specific in its characters and effects.

Further experiments with mallein, however are interesting, as it may be, an immunity can be given to healthy animals by its use, and if it is proved, a cure also can be made; the lessons will be extremely valuable in the prevention and cure of syphilis of man.

Practically the only methods by which glanders can be conveyed to man from the lower animals is by handling, riding and driving horses, and making post mortem examinations of glandered animals.

Anthrax.—Anthrax is of world-wide distribution, and while it is chiefly limited to cattle and sheep, it may be transmitted to goats, horses, wild game, mice, rabbits, guinea pigs, and also to man. It is comparatively rare in swine, and still more rare in carnivora. It can be communicated to birds if their temperature is previously artificially lowered to 100°, and to frogs if their temperature is previously raised. It is the most universally fatal of all specific diseases, and very rapidly so when any important organ is attacked during the progress of the disease. In animals other than the herbivora, sometimes a purely local infection results from inoculation, such as the "malignant pustule" of man contracted by handling skins or wool of carcasses which have died of anthrax. In Europe many cases annually occur among the wool-sorters, with many recoveries, and in Germany it is said 90 per cent. of the cases of malignant pustule recover; but when general anthrax occurs by inhalation of dust arising from dried skins, or by eating the meat of affected animals the result is generally fatal. The germ of anthrax was one of the first to be isolated by Pollender in 1855, and the mere discovery of the "bacillus anthracis" was the foundation of the Science of Bacteriology. It remained, however, for Pasteur to thoroughly investigate its life history and to discover an attenuation of its virulence in the form of an anthrax vaccine, which is now of practical value to stockmen in many parts of the world. As a preventative of anthrax and anthracoid diseases over 15,000 head of cattle have this year, in Colorado alone, been successfully vaccinated with Pasteur's attenuated lymph, and it is probable in the future, that all cattle will be so treated.

Outbreaks of anthrax are more or less restricted by conditions of soil, heat and moisture, and infected localities are frequently fatal only in certain seasons and during limited periods. Although the spores of the bacillus are practically indestructible by the ordinary forces of nature, yet the development of the virulent pathogenic germ from the spores is limited to very favorable conditions. Whenever an anthrax carcass lies unburied or unburnt, we get a liability to a permanent soil infection. Its widespread existence

over all the globe, where herbivora exist, can thus be readily understood. Anthrax is communicated to man by direct inoculation when handling dead animals, or by the ingestion or inhalation of germs or spores by means of the flesh of an infected animal or the dried particles of any portion of the body. The danger from the consumption of infected meat, however, is not so great as would be supposed on first thoughts, as in all cases of death from anthrax, decomposition very rapidly occurs, the blood remains fluid, and it is practically very difficult for unscrupulous persons to dispose of the meat for human consumption. Still in crowded localities where cattle and sheep are pastured close to large cities, many cases of human infection have occurred.

In Europe, several severe epidemics have at times so occurred, and in the 17th century, in Tuscany, the mortality was very great.

In most countries there are stringent laws requiring the burning or deep burial of all animals dying from anthrax.

Rabies.—This is another instance of a specific and fatal disease communicable to man and which has been known for many centuries. Although no specific germ has as yet been discovered and isolated, yet the virus contained in the secretions, especially that of the salivary glands of an infected animal acts by inoculation in a similar manner to that of a pathogenic germ. The carnivora are mostly susceptible, but all animals can be successfully inoculated, though with varying success. About one-fourth of a herd of cattle or sheep bit by a rabid dog will contract the disease. Although Pasteur's attenuated virus is applicable to treatment of this disease in man, it is inexpedient and against public policy to apply any other method but immediate destruction in the case of animals, and here it may be remarked, that although brain disease may occur frequently in the dog, without any taint of rabies, and from other non-contagious causes, it seems inexpedient to run the risk of waiting to determine the cause in the case of any brain diseases in these animals, and for public policy all such should be immediately destroyed.

The three diseases above alluded to, glanders, anthrax and rabies, constitute the three important and fatal specific diseases in which there can be no question of the expediency of the immediate destruction of all animals infected, together with a rigid condemnation of their carcasses for any use whatever to man. They also constitute the main diseases, which, we believe, cannot be originated *de novo*, under any conditions whatever, and also the principal animal diseases, which can therefore be almost, if not entirely, eliminated by repressive measures, and the diseases of all

others where receptivity plays a very unimportant part compared to the existence of the germ or virus.

The limits of this paper will only allow of a bare mention of the communicable parasitic diseases, which are mainly "taenia mediocanellata," (the beef tapeworm), existing in man as a fully matured worm, and in the flesh of cattle in the larval form; the "taenia solium" existing in man in the mature stage, and in pork in the larval form; the "trichina" of pork existing in man both as the fully matured and larval parasite. Other parasites infest the dog, the cat, rabbits and poultry, the true life history of which is as yet undetermined, but it is highly probable in many instances they may be communicable to man.

Vegetable parasites also affect animals and man in common, of which notable instances are some classes of ringworm, and the actinae affecting the muscular and glandular structures of cattle and swine, and producing the well known disease of actinomycosis. The question of the fitness for human food of any meat from any animal affected with actinomycosis is yet debatable, it being held by many that the disease is so localized, that it is safe to use for human food those portions of the body not actually infected with actinae, whereas others claim that the fungus is so migratory, that it is impossible to declare any portion of an infected animal clean, except by microscopic examination of the whole, which is of course impracticable.

Tuberculosis.—In the short time at my disposal, it is impossible more than to allude to the salient features of tuberculosis. In all respects the disease as it exists in domesticated animals is identical with that of man. As in man, the receptivity of the individual is equally as necessary as the existence of the germ for the occurrence of the disease, but from various causes the resistance of animals to the contagion is less. Between all animals it is intercommunicable, but some species, notably the horse, have more resisting power. Herbivora will contract it from carnivora, and the latter from the former, and omnivora from either, both by contact, cohabitation and consumption of the products of an infected individual. Birds and rodents are also easily inoculated with the specific bacillus, independent of its source, and all animals can be infected by man. There is absolutely no difference in any animal in the characteristic lesions caused by this dreaded microbe, fatal to most alike; intercommunicable among all animals and easily conveyed from man to all others, there seems no doubt whatever but that it is likewise communicable from animals to man, and it is claimed direct and positive proof is now obtainable.

Fortunately for the preservation of life, either the resisting power in the higher animals to the attack of this microbe, by the evolution of opposing leucocytes, is very great, or the conditions favorable for the propagation of the microbe itself are comparatively rare; otherwise this germ, so common to all, would sweep all life before it in less than a quarter of a century.

The disease has been noted and its symptoms correctly described by as early writers as Hippocrates, and many centuries ago the flesh and products of infected animals have been from time to time interdicted as human food.

Whether the disease originated in the lower animals or in man first, is a doubtful question. Preponderating evidence is in favor of its origin in the lower animals, and in no disease is the theory better illustrated, that the lower we go into organic life the less is the resistance to this microbe, and also the phenomenon is witnessed, that the greater the retrogression of a species, the greater is the liability to contract the malady. Proofs by the hundred can be given:—it is sufficient to allude to the intense liability of artificially raised rodents to successful inoculation, and the comparative immunity of the natural wolf; the existence of a twenty per cent. infection among inbred or intensely bred domesticated cattle and the entire absence among the cattle of our western ranges; the resistance of the horse, bred for generations towards a muscular perfection, as against the liability of the advanced dairy cow bred towards an unnatural excess of glandular secretion. In man too the prevalence is far greater among the extremes of development, as witness its prevalence among the many instances of pauper retrogression in our large cities and in the inbred royal families of Europe. So much do conditions enter into the causation of this malady that it may fairly be claimed that the active pathogenic germ plays but a secondary part.

For these reasons tuberculosis as a contagious disease must be considered from a standpoint different to all other spreading maladies from animals to man, and the grave difficulties connected with sanitary measures, tending to its extirpation, become apparent.

To a large extent it is a disease due to ignorance of the ordinary principles of physiology; in a word it is a disease of retrogression, and the penalty of inharmonious development.

While it is true that we can minimize the chances of infection to susceptible subjects by fighting the germ, the direct and active cause, and so probably save annually thousands of lives, yet we must not lose sight of the fact which the study of this disease in animal life so thoroughly proves, namely, that an almost certain

immunity against the attack of the germ can be acquired, and this more so the higher we progress in true physical development. The lessons the widespread existence of tuberculosis teach, must and will be taken to heart, and finally do more for sanitation than all other plagues of history. The absolute certainty of its appearance in a herd of cattle, inbred or intensely bred toward an undue exaggeration of one secretion, or towards an excessive elasticity of connective tissue; the equal certainty of its appearance in over-crowded and badly ventilated stables; the extreme liability of all animals too quickly differentiated by artificial conditions of management; the certainty of infection resulting from the presence of the germ under susceptible conditions, entirely independent of the kind of animal from which the germ originates, all teach that while we may minimize infection by war on the germ, we must, both in man and animals, radically alter our present methods of development, if we wish for the desired reduction in the number of victims annually claimed by this, the white plague of the 19th century.

Cattle, swine and poultry are the domestic animals most prone to tuberculois. and from the products of which most danger exists of human infection. The disease can be either local or general, and various symptoms are shown dependent upon the organ or organs affected.

In the early stages, these are so obscure and indefinite that reliance, as to its existence, can only be placed upon the "tuberculin" test. This is the hypodermic injection of the toxic derivatives of an artificial cultivation of the bacilli. If the disease of tuberculosis is present, the temperature of the animal will rise two or more degrees above the normal of the individual experimented upon. Absolutely no harm and no change is observed to follow its injection in a non-tubercular subject.

When visible signs are absent, the tuberculin test is invaluable. Objections to its general use, are its expense, its delicacy (the slightest amount of infection reacting as well as the greatest), and the practical difficulty connected with the disposal of reacting animals.

As it is impossible to go properly into the very important subject of necessary legislation in respect to this disease, I will conclude with a brief resume of the results of late researches into this subject.

1. Koch claims to have established the unity of the tubercle bacillus in all animals including man, but Maffuci claims a difference exists between that of mammals and birds, that of the latter being less virulent than the former. Kruse gives the history of

four varieties, and Pansini concludes that transition forms exist. Experimental research so far has not established sufficient differentiation of the tubercle bacillus, (in spite of its well known character of being highly specialized towards an intra cellular existence as a parasitic organism), as to lead to the hope that it cannot take root in all mammals alike under similar conditions.

Other microbes, such as that of Texas fever, are so specialized as to be harmless to other animals than cattle, and it may be that that of tubercle will prove to be of a varying degree of virulence as between animals and man, but at present we must accept the conclusions of Koch.

2. The raw milk of tuberculous cattle, even if the disease is localized, and not general, will communicate the disease to all other susceptible mammals. The flesh of tuberculous *cattle* is contagious when the disease is general, not when localized. The flesh of tuberculous *swine* is infective generally, on account of the greater liability in the hog to general tuberculosis. Both milk and flesh of both is harmless if properly cooked, boiled or sterilized.

3. Many thousands of illustrations are now on record proving that the tuberculin test is extremely accurate in diagnosis of even the slightest presence of tuberculosis; and that it is harmless to healthy animals.

4. Although the conditions of susceptibility are hereditary, the young of tuberculous animals are born free from the disease, and can be raised apart from their mothers without necessary contraction of the disease.

5. Susceptibility is much increased by inbreeding or intense breeding from varieties for one result, by close confinement, by impure air, and by any condition or sets of conditions which lower the general vitality of the system.

6. Where conditions exist tending to increased susceptibility, the germ itself increases in its contagious virulence as it spreads from one animal to another of those under such conditions, and this to such an extent that an ordinarily immune animal is likely to succumb when brought into immediate contact, with the germ so increased in virulence.

7. The susceptibility of inbred stock can be remedied by suitable outcrossing, and the same is true, but less marked, of intensely bred animals.

8. A system of semi-annual tests with tuberculin, isolation of affected animals to be kept for breeding purposes only, condemnation of all showing physical signs of the disease, strict attention to

improved sanitary conditions, and methods of breeding, has been found effectual in stamping out the disease among cattle.

9. Considering the great susceptibility of so many of the human family by reason of their faulty environments, and in healthy men immediately after recovery from other germ diseases, and in children generally after attacks of the infantile fevers of nutrition, all milk derived from dairies which have not been submitted to the tuberculin test, should be sterilized, or boiled, and all meat from animals with general tuberculosis should be condemned.

10. It is a grave question as to how far the expense of the tuberculin test, and that of the occasional condemnation, should fall upon the dairy owner, or upon the public; for it is hardly fair that a higher standard of purity of food products should be expected from the milk vendor than from the butcher who sells ptomaines with his meat; the saloon keeper who sells fusel oil with his whiskey; or from the druggist who vends unknown patent medicines for the cure of unknown diseases, all of whom may be said to be equally guilty of occasionally poisoning the public, as the dairyman who unwittingly sells the seeds of consumption with his milk.

SOME REMARKS UPON TINEA TRICOPHYTOSIS OR BARBERS' ITCH.

**By M. H. SEARS, M. D.,
Denver, Colo.**

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Ringworm or Tinea Tricophytosis is a disease of the skin, caused by the presence of the trichophyton, a low order of vegetable fungus. No part of the surface of the skin is exempt from the ravages of this mycelium, where it can be seen assuming irregular forms of more or less circular outline. As the disease attacks the hair follicle and peri-follicular spaces, its favorite locations are the surface of the scalp, and that portion of the face of men covered by the beard; but it is to be seen also, at times, upon the skin of any part of the body. For these reasons, and the further reason that the changed environments due to the clothing, cause a difference in the clinical features of the disease; it is usual to describe trichophytosis as being in three forms, as follows: tinea circinata, when it attacks the skin surfaces of the abdomen, back, extremities or other non-hairy portions of the body; tinea tonsurans, when it attacks the hairy scalp; and tinea sycosis, or barbers' itch, when it

attacks the surface of that portion of the face of men covered by the beard. These classifications would seem unnecessary; for as above remarked all are caused by the same germ, and are the same disease, but for clinical reasons the classification is very convenient. In this short article we shall speak of the two last named forms, to-wit: *tinea tonsurans* and *tinea sycosis*, leaving the first named form, *tinea circinata*, for some other occasion. *Tinea tonsurans* is also a form of the disease seen in childhood. It is contagious, hence is frequently seen in several children of the same family who use the same brushes, combs, towels, etc. Perhaps nothing could be more suggestive from a hygienic standpoint than the necessity of occasional cleansing of brushes and combs, and the use of individual towels and sponges. Neglect to do this will account for occasional epidemics among children, in asylums and nurseries where large numbers are gathered together.

The disease will not show itself in a night, as happens in *alopecia areata*, for there is a period of time, after infection, during which the disease is in its incubative stage. It is first noticed upon the top or sides of the head, where the hair is thinner than the surrounding hair, or the disease may have progressed until there are several circular areas which vary in size from a silver quarter to a silver dollar; these may be almost bald.

The surface of the scalp will vary in color. It may be of a dark wine shade or a dirty white, and will always be covered with a crop of minute scales which exfoliate. One of the distinctive features of the disease is the sparse, stunted and exhausted condition of the hairs, which grow from these surfaces. They are lustreless, have a nibbled or crushed off appearance, and because of the fact that the "ringworm," or germ of the malady, attacks the hair root, are easily extracted or fall out spontaneously.

The loss of hair is usually not permanent, unless it occurs in a rare form of the disease, known as *tinea kerion*, in which the hair bulb is entirely destroyed; under these circumstances permanent baldness will result. "Ringworm" does not seem to be a disease confined to man, for it is seen in some of the lower animals. Cats, dogs, sheep, and even the horse, have been known to be affected with it; and children have contracted it from the former two named. It will not always follow a single exposure, or indeed a continuous exposure; seemingly requiring in addition, other and favorable conditions for its nourishment and development.

Alopecia areata, or *circumscripta* as it is sometimes called, has been spoken of as a disease with which "ringworm" may be confounded. As the two occasionally co-exist in the same individ-

ual, mistakes of diagnosis will happen. As the hair in alopecia comes out en masse, leaving a bare, bald spot, unincumbered with exfoliating scales or stunted hairs, as above described in tinea tonsurans, mistakes in diagnosis will not happen often. Seborrhoea sicca and psoriasis are also to be excluded. Tinea sycosis, or barbers' itch, is a variety of trichophytosis, which attacks the beard covered face of men; avoiding very generally the upper lip, or at least rarely attacking its surface. It begins by forming small, roundish and discrete papules that are elevated above the surface and covered with small branny scales and quite tender, especially if irritated. The tendency of this form of the disease is to form patches or colonies of papules which speedily coalesce and become confluent. They extend in an irregular manner, if neglected, pustules form around the hair root and the hair finally falls, after presenting the same characteristics described in tinea tonsurans. If the disease becomes pustular, the excretions, which are also sticky and about the consistency of mucilage, form crusts of very adhesive character. Under these crusts the fungus is very active, burrows as it were, and when the crusts are removed by sponging, expose angry excoriations in the skin. That tinea sycosis, tinea tonsurans and tinea circinata are the same disease is amply proved by the microscope, for the trichophyton, or vegetable spore, is present in them all; if this evidence is not sufficient, it may be stated that it has been noted many times that tinea circinata will spread to the region of the beard from other portions of the surface of the body—a clinical evidence that is almost convincing. Tinea tonsurans will do the same, but as this variety is a form of the disease seen mostly in childhood, and tinea sycosis occurs in adult life, the opportunities for observing the relationship between the two are comparatively rare.

There is a perceptible difference in appearance between tinea sycosis and the other forms of the disease, due no doubt to the clothing. This fact must never be lost sight of in distinguishing the clinical differences of the three forms of the malady, because of its importance in diagnosis. As the face is constantly exposed to the weather, sycosis has a darker "dregs of wine" color than either tonsurans or circinata. Light haired individuals are more susceptible to tinea sycosis than dark haired people. The treatment of all forms of "ringworm" is of course of great importance, and largely the same. As may be inferred, parasitocides are very useful; the indication being to destroy the life and vitality of the parasite. This may be accomplished by a number of substances. Among them may be named boric acid, sulphur, iodine in tincture,

corrosive sublimate, resorcin, thymol, aristol, turpentine and others. It is desirable in tinea tonsurans to avoid, if possible, epilation or extraction of the hairs, and this can undoubtedly be done quite frequently, if some of the active remedies named above are used early. The hair should first be cropped short or shaved. Then after using some simple salve, like a six per cent. carbolic salve, or a thymolized unguent, to soften and render the scalp pliable, spirit of green soap should be thoroughly rubbed in with water, following the manner of a shampoo. Several applications of this kind, efficiently made, will occasionally be followed by permanent relief; but if not, a sulphur ointment may be applied to the scalp, after the shampoo, or some one of the other parasitocides, single or in combination. Success will only occur frequently, after persistent efforts have continued for months. Epilation will also have to be practised in many instances before success will be attained.

The treatment of tinea syaosis is conducted on the same general principles and the same general way. A mild soap with warm water is first used to remove the crusts, and this is to be followed by an efficient shampoo with the spirit of green soap. The infected surface of the chin and face should then be cleanly shaved, and the oil of sweet almonds thoroughly applied, for the purpose of rendering the skin soft and pliable. If after earnest effort has been made to avoid epilation, no improvement has taken place, epilation may be practised. After removing the oil with warm water and a mild soap—mild potash soap is excellent—an ointment containing one of the parasitocides should be lightly but thoroughly applied. A benzoated oxide of zinc ointment, containing salicylic acid, fifteen grains to the ounce is good, or two drams of sulphur may be added also. Beta-naphthol, ten grains with a scruple of sulphur to the ounce, of oxide of zinc ointment is another formula. Whatever method is adopted, must be followed persistently and, if necessary, for several months before a cure is effected.

501 *McPhee Building.*

“It costs two hundred dollars to have a frozen toe amputated in Alaska.” “Well, if you go, you can better have yours cut off before you start.”—*Chicago Record.*

Nurse—“Johnnie, the stork has just brought you a little baby. Wouldn't you like to see your little brother?”

Johnnie—“Naw, but I'd like to see the stork.”

Perhaps of interest

INVERSION OF THE UTERUS.

A rare case in obstetric practice.

By JESSE HAWES, M. D.,
Greeley, Colo.

Some cases are worthy of being reported by reason of their rarity. Inversion of the uterus is exceedingly rare. It occurs once in about 200,000 cases. Among its predisposing causes are named hemorrhages and relaxed uterus. Among its immediate causes are pressure from above and traction upon the cord. The pressure from above may be made by severe straining efforts.

Case. Mrs. M. H., married, one child sixteen months old, form petite, weight about eighty pounds, general health, fair. Previous history: chief cause of complaint during the past three years, before and after marriage, has been on account of uterine displacement, retroversion and prolapse.

I attended her confinement sixteen months ago. Labor normal; recovered her usual health and vigor in normal period. Became pregnant early in December, 1896. First few months suffered much from nausea, then followed several months of ordinary health. The last month before confinement complained of nausea, backache and irritable condition of reproductive organs. Vagina during the last six weeks of second pregnancy was exceedingly sensitive. At about seven and one-half months, had urgent symptoms of premature labor, at which time the cervix was obliterated and the os dilated to an inch in diameter. This tendency was overcome by rest and remedies.

She was confined August 5, 1897, several weeks in advance of expected time; a week previous to confinement, had at irregular times, threatened labor, which was postponed as before. Twenty-four hours before confinement the cervix was in the condition it should be, a month before confinement. Was called to case about nine p. m., August 5th, found patient having active and very severe labor pains, occurring every five minutes; sedative remedies failed to quiet the threatened labor. By 11 p. m. os was dilated to an inch in diameter, labor was completed at 1:30 a. m.

Shortly after birth of child, the loss of blood incident to labor, seemed rather excessive, and as she was so slight in physique, the rather abnormal quantity awakened a little anxiety and led me to desire an expulsion of the placenta as early as possible. An examination by the vagina showed one edge of the placenta to be

presenting at the os; the os was large and soft, the uterus rather feebly contracted. Stimulation of the uterus by manipulations, through the abdominal wall, gave rise to a fair contraction, and compressing the uterus by Crede's method, and seizing the edge of the placenta, it was easily removed. A fair contraction of the uterus followed the expulsion of the placenta, and I regarded the case as practically terminated.

Solicitous in regard to further possible hemorrhage I examined the womb four times in the next fifteen or twenty minutes by palpation through the abdominal wall. At the last of the four examinations, I called the mother of the patient to the bedside and required her to examine and recognize the contracted uterus, and mentioned to her that whenever she could feel that hard globular body she might be quite certain that hemorrhage would not occur. I stepped into an adjoining room, sat down by a table, and preparing a few doses of ergot and a preparation for after pains, conversed with friends of the patient for perhaps fifteen minutes. During our conversation the patient had two after pains of great severity. After the second after pain I returned to the bedside of the anxious, suffering patient, and tried to allay her mental trouble, with the assurance that she might expect after pains, since this was her second labor, but that we would modify them as much as possible by medicines.

Looking at her carefully, I was struck with the great change that had come over her since I had left the room fifteen minutes before. She had the face of a person suffering from severe shock. Startled, I placed my hand upon the hypogastrum, expecting to find a womb distended with blood. The hypogastrum was flat, not even a flaccid uterus was found; pressure into the pelvis discovered a disk having a depression in its centre. A finger carried into the vagina found a large clot of blood; a large quantity had passed through the vaginal orifice; hastily removing the clot, the inverted body of the uterus, was found in the vagina. Carrying the finger up to the neck, it was found very soft and yielding. Without waiting to remove the fingers from the vagina, I quite easily restored the body of the womb to its normal position. The body was flaccid, the cervix soft.

Meanwhile I had requested the presence of Dr. Law, who came a few minutes after the restoration of the womb to its normal position. We retained a moderate pressure upon the cervix to prevent a recurrence of the inversion, for the period of a half hour, but the relatively large loss of blood, the shock due to the inversion and its restoration, caused my patient to sink and die within

an hour, notwithstanding the efforts of Dr. Law and myself to restore her by a large saline injection, and the hypodermic use of strychnia, trinitrin, etc.

What caused the inversion? I attribute the accident to the strong pressure of the abdominal walls, during the after pains, upon a soft uterus and a softer cervix. I attribute death to the combination of the hemorrhage, the shock of inversion, the shock incident to the reduction of the inversion, and to the frail body of the patient.

The careful examination made immediately before and immediately after the accident, eliminated some questions as to etiology.

The Denver and Arapahoe Medical Society.

This report is original with this JOURNAL, and appears only in this Journal.

At the second November meeting of this society, held on the 23d at the Brown Hotel, the following were present: Drs. Hershey, Spivak, Powers, Godfrey, Shotwell, Macomber, Wood, Fenn, Stover, Mitchell, P. D. Rothwell, Pershing, Herrick, Hodson, Hall, Bane, Rover, Burns, Rammel, Beggs, Rogers, Ryan, Perkins, Hopkins, Shollenberger, J. J. Powers, Tyler, Grant, Hawkins, Freeman, Fleming, Wetherill, Van Zant and Axtell. In the absence of President Jayne, Vice-President Hershey presided.

Dr. Chas. Powers read the first paper of the scientific program, entitled "Methods and Results in 450 Cases of Fracture of the Fore-Arm Bones." His paper was an exhaustive treatise of the various fractures. He laid much stress upon early motion in Colles' Fractures.

Dr. Godfrey emphasized the use of early motion in Colles' Fracture. He reported a case put in plaster for two weeks, at which time he made passive motion and left off the cast, but the patient insisted on putting on the cast and the result was a stiff joint.

Dr. Pershing spoke of the danger of keeping a splint on too long and mentioned a case with a history of injury to the shoulder, followed by a slight neuritis. Someone had applied a splint to the arm and fingers and allowed it to remain on for five weeks. When taken off, the fingers were stiff. Patient has since acquired some motion, but this is very imperfect.

Dr. Powers also presented a patient, forty years of age, who was struck on the head, in May of 1897, by a street car. A depressed bone on operation was removed, and by this the frontal

sinuses opened. A lacerated dura and brain were found. The wound was cleaned and partially closed. On the second day a fracture of both superior maxillae and nasal bones was discovered. No plate could have been inserted at the time of this operation, owing to the unclean condition of the wound. The patient presented a large depression over right frontal bone, covered in by the scalp.

Dr. Pershing said that the concavity at the seat of the wound was of interest to him. Its depression he thought was due to the fact that the normal intracranial pressure was lessened. On stooping down patient's wound bulges out, and for a moment he loses vision in the right eye. He has had no other neurological symptoms.

Dr. Axtell thought that the removal of a large plate of bone from the skull was an operation of questionable value. It left a large cicatrix which later produced convulsions. He was in decided favor of elevating depressed bones, but where a bone had any dura clinging to it he thought it ought to be left. Such bones have strong reparative powers. If a portion of the bone lives, much has been gained. In certain cases the bone could be wired in place.

Dr. Tyler wanted to know if the case had presented any loss of memory, and Dr. Pershing said that there was none.

Dr. Powers said that in this case the wound was an infected one, the fractured bone exceedingly loose and suppuration inevitable, and that the bone would have acted as a foreign body. In certain cases simple elevation and leaving the bone would be the best plan to pursue.

Dr. Godfrey exhibited two anomalies of the arch of the aorta. In one, the vertebral artery on the left side came off from the arch of the aorta, and in the other the innominate artery gave off the left common carotid. He spoke of a case observed by Dr. Shaw, of Chicago, in which the aorta was split down to its junction with the heart.

Dr. Bane read a paper on "The Card Index System for Keeping Record of Cases," and showed his record file. He spoke of its advantages and elaborated his method.

Dr. Fenn was an earnest advocate of the card record and found it especially useful in dispensary work. A dozen histories of cases can be taken at one time by the students. A cheap apparatus can be made to do the work of any expensive affair.

Dr. Tyler had made his own card system by using slips and

putting them in cases with dates, and using a separate index for names.

Dr. Wetherill thought the card system of great value. It helps to make diagnoses. That is the aim of our work. It systematizes work. Certainly in dispensary work the card system is invaluable. He uses his printed form for his work.

Dr. Denison thought the card system makes one's work complete. With his records he can refer to any case for years back. It also makes valuable statistics by arranging cases.

Dr. Spivak uses slips of paper and puts them in envelopes according to names and diseases and has then a double file.

Dr. Hall reported a case of splenic leukemia, illustrated by microscopical slides prepared by Drs. Stover and Fenn. (This demonstration ought to have been arranged in the center of the hall.)

Dr. Ellen M. Wood, of the University of Denver, class of 1894, was proposed for membership by Drs. Hershey and Axtell; and Dr. Walter Hilliard, a graduate of the Medical Department University of Louisiana, class of 1869, was proposed by Drs. Hershey and Jayne.

The society then adjourned.

Denver Clinical and Pathological Society.

This report appears exclusively in this Journal each month.

The November meeting of this society was held in the offices of Drs. Edson and Lobingier, Dr. Bergtold assisting.

Dr. Wm. B. Fenn was elected to membership. Dr. Bergtold made a brief report of the results of work done by Dr. Trudeau, for tuberculosis in the Adirondac Laboratory at Saranac Lake, New York.

Dr. Le Mond reported a case of eye sight, in a man 69 years of age, lost by a lamp explosion. After the accident, glaucoma followed and finally a cataract appeared, which he operated. The pressure being relieved in front, it was followed by a hemorrhage, followed with probable loss of eye.

Dr. Axtell reported, with exhibition of specimen, a new method for preserving pathological specimens without their losing color or shape.

Dr. Leonard Freeman reported a case of operation for gall stones. At time of operation no stones could be found in the common duct, even after a most careful examination. Patient began vomiting soon after the operation and finally blood appeared in the vomitus. Patient died on ninth day from loss of blood. From post mortem, no cause for bleeding could be found. A num

ber of gall stones were found in the common duct. There was no peritonitis. Drs. Bergtold, Powers and Freeman discussed the report.

Dr. Wetherill reported and exhibited an instrument, devised by himself, to be used in colpotomies. He also exhibited and demonstrated an original device for the class room demonstration of the different layers of the abdominal wall.

Dr. Hershey reported the use of atropia and cocaine in shock and morphine poisoning. Drs. Whitney, Wetherill, Hall, Edson and Hershey discussed the report.

Dr. Powers exhibited two photographs of a case of probable sacro-coccygeal tumor, probably dermoid in nature. He also reported a case of appendicitis with exhibition of specimen and a painting of the specimen. The case was complicated by a tear of either the bladder wall or ureter. It closed spontaneously in eight days.

Lunch followed the adjournment of the society.

L. M. WALKER, Secretary.

TREASURER'S REPORT FOR YEAR.

Receipts for the year ending Oct. 10, 1897,	-	-	\$122.41
Expenditures for the year ending Oct. 10, 1897,	-	-	97.61

Balance, - - - \$ 24.80

LEONARD FREEMAN, Treasurer.

SECRETARY'S REPORT.

			AVERAGE.
Number of meetings held,	- - - -	9	
Total number of members attending,	- - - -	217	24 1-9
" " " membership,	- - - -	352	39 1-9
" " " guest entertained,	- - - -	26	2 8-9
" " " cases reported,	- - - -	136	15 1-9
" " " specimens, new instruments,	}	46	5 1-9
" " " books and new remedies exhibited,			
" " " men taking part in discussions,	- - - -	162	18
" " " names proposed during the year,	- - - -	14	
" " " accepted,	- - - -	9	
" " " rejected,	- - - -	5	
" " " dropped, resigned and deceased(1),	- - - -	7	
" " " in good standing,	- - - -	39	
		'95	'96 '97
Number of members attending,	- - - -	179	197 217
Total membership,	- - - -	337	326 352
Number of cases reported,	- - - -	72	93 136
Number of specimens, new instruments,	}	28	32 46
books and new remedies exhibited,			
Number of men taking part in discussions	- - - -	88	137 162
Average attendance 1894-1897	13 1-2 19 8-9 21 8-9		24 1-9

L. M. WALKER, Secretary.

The Denver and Arapahoe Medical Society.

This report is original with this JOURNAL, and appears only in this Journal.

The first December meeting was held in the Club Room of the Brown Hotel, Dec. 14th, 1897. The following members were present: Drs. Jayne, Spivak, Eskridge, Hall, Blaine, Bonney, Denison, Perkins, Sewall, Beggs, Zederbaum, Peavy, Roberts, Coover, Freeman, Edson, P. D. Rothwell, Liebhardt, Williams, Levy, W. J. Rothwell, Boice, Waxham, Herrick, J. J. Powers, Shollenberger, Rover, Tyler, Bane, McNaught, Chas. Powers, Mussey, Holmes, Love, Chase, and Axtell.

Dr. Bonney read a paper entitled, "Report of an Unusually Successful Result of Thyroid Treatment in a Case of Myxoedema." This paper was followed by a paper on "The Thyroid Extract and Its Uses," by Dr. Eskridge.

Dr. Edson reported a case under his care, in Boston, in which the onset was very gradual, with a skin like a plucked goose, hair thinned and all the symptoms of myxoedema. Several years were required for recovery.

Dr. L. Freeman reported the case of a woman with goitre, to whom he had given iodine and red oxide of mercury, when it began to disappear. Her daughter had a similar swelling and after using the same treatment he failed to get any results. He began using the thyroid extract and in a few months it had almost disappeared.

Dr. W. J. Rothwell had reported a case of myxoedema to the State Society in 1895. In the case he used 5 grs. of the dessicated extract (P. D. & Co's) 3 times a day. Patient lost 30 lbs. in weight and mental condition cleared up brilliantly. He has had to continue the drug since that time.

Dr. Sewell spoke of the futility in speaking of grains in measuring the amount of this extract. The peculiar principle of the gland is not distributed alike in all glands. He thought it best to get the required dose by clinical experience.

Dr. P. D. Rothwell spoke of a case of simple goitre with diminution of the gland, $\frac{1}{4}$ of an inch, but with an increase weight of patient of over twelve pounds.

Dr. Bonney said that his patient, now, after four months was perfectly well. He has had to increase the dose to keep the symptoms from returning.

Dr. Eskridge said that thyroid glands taken from American animals seemed to contain more of the thyroiden than animals in France.

Dr. Hershey was not present and his paper was read by title.

Dr. Denison read a paper entitled "Passing Considerations of the Antitoxin Treatment of Tuberculosis."

Dr. Waxham thought that the future success of treatment in

tuberculosis was along the line of serum therapy. He thought the serum might require some antitoxin to the streptococci as well as to the tubercle germ.

Dr. Denison had used antistreptococcus serum with disappearance of pus germs.

Dr. Bane reported a case of a bug in the ear, with its removal.

The president on motion appointed Dr. W. M. Munn a delegate to the National Educational Association. He announced that he had appointed the following committee to increase the society's membership: Drs. Chase, Blaine, Perkins, Hall and Beggs.

It was moved that a sufficient appropriation be made to send Dr. Spivak's reprint on Medical Libraries to the County Medical Societies of the United States. Adjournment.

Woman's Clinical Society.

The Denver Clinical Society held its regular meeting Dec. 7th at the High School Building. The President, Dr. Gale, presided. There were present Drs. Lawney, Clara Moore, Mitchell, Roberts, Goodman, Hayden, Love, Gale and Peavey.

Dr. Lawney moved that favorable action be taken on the application of Dr. Margaret Hart for membership in the society. Carried.

The medical paper of the evening was given by Dr. Hayden on "Typhoid in Children." She reported a case in which an obstinate constipation and an eruption of rose spots covering the abdomen and back, made it of unusual interest.

In the discussion which followed, Dr. Mitchell said there had been several cases of typhoid in children at the County Hospital, but that they were typical cases and differed in no respect from typhoid in the adult.

Dr. Love uses a tepid pack to reduce the temperature, wrapping the child in the pack from the axillae down and allowing it to remain on for twenty minutes.

A case of unusual interest was reported by Dr. Mitchell, seen in the service of Dr. Levy at the County Hospital, a case of tubercular ulcers in the mouth.

Owing to trouble with the electric lights the meeting adjourned at an early hour.

JOSEPHINE L. PEAHEY, Sec'y.

The Practitioners' Club.

The regular meeting of the Practitioners' Club was held at the office of Dr. Macomber, Nov. 30th. Members present: Drs. Case, Hall, Powers, Mann, Field, Holmes, Bates and Macomber.

The literary program was opened with a paper read by Dr. Bates, on "Respiration." This proved very interesting and was discussed by all the members.

Dr. Case was appointed to read a paper the third Tuesday in December, on "Mistakes in Medical Practice," the meeting to be held at the office of Dr. Holmes, in the Jackson Block.

The meeting then adjourned. G. N. MACOMBER, Secretary.

News Items.

Dr. G. H. Stover picked turkey bones with his parents in Fort Collins Thanksgiving day.

Dr. and Mrs. A. C. Godfrey are receiving congratulations over a new arrival in their family in the person of a girl baby.

The hospital staffs of the Arapahoe County and St. Anthony's Hospitals have been chosen. They remain the same as last year.

The Faculty of the University Medical College gave a banquet to the lecturers and clinicians connected with the College, at the University Club, on Nov. 20th.

The Hunter Drug Co. moved from their old stand on Curtis and 16th Streets to the Mack Block, where they will have better facilities for handling their large stock of drugs.

Dr. Edward Noyes, Class '97 University Medical College, received the appointment at the County Hospital, to succeed Dr. Chapman whose term of service expired in November.

Dr. W. C. Davis took a ten days' vacation to Chicago, Indianapolis and other points in the East, during December. The trip afforded him the much needed recreation which he sought, in connection with business interests.

It is announced that Estes Park is to be sold by its present owners. This Park is one excellently adapted by nature for a large sanitarium and to it hundreds of tubercular cases go every year. A company of physicians might make a profitable investment in its purchase.

The familiar sign of "Dr. Black, Practice Limited to Eye, Ear, Nose and Throat," which so long looked down upon the people on 16th Street from the Steele Block, is now replaced by that of Dr. Waxham, while Dr. Black has found new quarters in the Denison Block which has just been completed.

Drs. and Mrs. M. Beshoar, of Trinidad, celebrated the twenty-fifth anniversary of their wedding, in that city last month. Many friends of pioneer days, as well as those of recent times, were present to congratulate the couple on their years of past happiness and prosperity and to hope for them many more to come.

Dr. Henry Sewall, of the State Board of Health, was called to Leadville to investigate the scarlet fever epidemic which threatened that town. The disease seemed to have gotten its start before it was positively determined to be scarlet fever. Dr. Sewall thought the Leadville Board of Health amply able to cope with the disease without any interference from the State Board.

**MONTHLY BULLETIN OF THE COLORADO MEDICAL LIBRARY
ASSOCIATION.**

T. H. HAWKINS, M. D., President.
LAURA LIEBHARDT, M. D., Treasurer.

HENRY SEWALL, M. D., Secretary
J. C. DANA, Librarian.

NO. 4. DECEMBER, 1897.

The Library has accumulated a great many duplicates of medical periodicals—Medical Record, New York Medical Journal, Medical News, Boston Medical and Surgical Journal, Journal American Medical Association, Gynecological and Obstetrical Journal, Journal of American Medical Sciences, etc., etc. Those who wish to complete their files should make up a list of their "wants" and send it to Dr. Henry Sewall, No. 25, 18th Avenue, Denver, Colo., who will cheerfully supply the wanted numbers or volumes. Any physician in Denver, or outside of Denver, may apply. The accumulation of duplicates was so great, and space is so valuable, that six boxes of duplicates were sent by the Association to the Army Medical Museum, at Washington.

A box of books and duplicates were received from Dr. Jesse Hawes, of Greeley, Colo. Dr. C. K. Fleming has sent in his usual quota of exchanges.

NEW BOOKS:—Die Kronkheiten des Magens, Prof. F. Riegel, 2 vols. Nothnogle's Specielle Pathologie und Therapie. 1897. Tuberculosis of the Genito-Urinary Organs, by Nichols Senn. 1897. Index Catalogue, 2d vol. of Supplementary series.

Miss Zoe Guernsey has filled most efficiently the office of medical librarian for some time. She has introduced order into a good many chaotic nooks and corners.

The annual meeting of the C. M. L. A. will be held Monday evening, January 3, 1898. All interested in the work of building up the only medical library in the West, are invited to attend the meeting.

In the January Bulletin will be published a list of periodicals subscribed by the Library and those donated by members.

This is the only Bulletin published in the United States in the interest of a medical library, as far as known. In the succeeding issues the editor intends to devote considerable space to the general question of medical libraries in the United States, a subject which as yet has never been discussed properly.

Dr. Geo. M. Gould, of Philadelphia, informs the writer that a meeting of medical libraries will be held sometime in January, 1898, and a permanent organization will be effected. We wish Dr. Gould, the instigator, God-speed.

C. D. SPIVAK.

THE COLORADO MEDICAL JOURNAL.

SUCCESSOR TO

THE COLORADO CLIMATOLOGIST AND DENVER MEDICAL NEWS.

A Monthly Journal for the Medical Practitioners of Colorado and Adjoining States.

EDWIN R. AXTELL, M. D., EDITOR.

E. A. SHEETS, M. D., MANAGER.

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VOL. III.

DENVER, COLO., DECEMBER, 1897.

No. 12.

Editorial.

The Year That Has Passed.

Eighteen hundred and ninety-seven has nearly gone and with it many a glorious throng of happy dreams. The COLORADO MEDICAL JOURNAL has rounded its third milestone. It has gone forward in strength and purpose and has fulfilled all of the obligations laid upon it. Each month of the past year it has carried a budget of medical knowledge, of news, of crisp editorials and of well arranged book reviews, that the profession of the West could get in no other way. We are assured that our monthly visit is a pleasant one and that our efforts are appreciated.

In 1898 we shall strive for even greater gains than we have made. It will be a year of moment to the physicians of Colorado and to the entire West.

This Journal aims to be the right bower of those men who are working and dreaming through the night of the next meeting of The American Medical Association. It will be a meeting that every man in the West ought to support loyally. Every physician ought to contribute something to its success. All along the line, the one cry ought to be "Success."

This Journal will keep you posted on what is to be done. You

will want all the news and we will publish it all each month. We feel sure that we will have your support.

To all of our good friends who have so willingly helped us month by month we return our grateful and heartfelt thanks. Without their kind support the duties of the editor would be very onerous. They lighten it until it is a pleasure to serve. Of our collaborators and subscribers we are duly appreciative and we can never return their kindness rendered. To all our readers, to all our advertisers, to all our friends, we wish full prosperity for the coming year and a happy holiday time.

† † †

How the Proceedings of the American Medical Society are Reported.

Mr. William Whitford, in the Phonographic Magazine for October, writes about "How the Proceedings of the American Medical Association are Reported." Mr. Whitford is the official reporter for this association and the work of selecting and assigning the stenographers to the different section meetings is intrusted to him.

"Only discussions and extemporaneous remarks are stenographically reported, the papers being handed in to the secretary for publication as soon as read.

Of the eleven sections, numbers 1, 2, 3 and 4 are the most difficult to report, as the papers presented before them are written mostly by specialists and are discussed vigorously by equally able men. The rate of speaking in these sections varies from 130 to 175 words per minute. Of the 9,000 members, there are 12 gentlemen who exceed 180 words per minute in discussions and keep it up for five and ten minutes at a time. When we consider the length of some of the words encountered in medical reporting, this speed is equivalent to 210 or more words per minute of ordinary matter."

† † †

A Municipal Outrage.

The recent raid made on the Chinese of Denver, as well as other large cities, by the police authorities in order to make them prove their legal right to reside in this country, was, to say the least, a very questionable proceeding. They hunted these Chinamen down like rats in a hole and then hauled them up before the police court, hardly giving the frightened Mongolians time to know what was being done. Such methods are outrageous, from a standpoint of infringement of personal liberty as well as a psychological one. We all know that no class of foreigners are as peaceably inclined, and who go about their own business as strictly as the Chi-

nese, and while we are aware that in some respects they are not the most desirable class of citizens, nor do we intend to champion the cause of the Chinamen, still they have personal rights we should be bound to respect. And this wholesale driving of Chinamen into the police courts, without a justifiable cause, we protest against. The element of fright which attends such an outrage is not to be passed unnoticed. It is a well known fact that fright produces functional disorders of all kinds, with a sometimes serious disturbance of the entire digestive system and even serious cardiac mischief. This is too enlightened an age for a repetition of such monstrous doings.

† † †

Dr. Jackson Speaks a Good Word for Denver.

In the issue of Nov. 20th of the Journal of the American Medical Association, we recognize the fine hand of Dr. Edward Jackson in a editorial in which he enthusiastically sounds the praises of Denver as being capable of entertaining the guests who make the long trip to the next meeting of the Association, and proves conclusively that those who fail to come will find it a constant source of regret to themselves. He asserts that the committee on arrangements have already proceeded farther and have its plans more matured at the present date, than has ever before been done.

We hope that the many readers of the Journal of the American Association will catch the spirit of enthusiasm from Dr. Jackson's editorial and find themselves irresistibly headed for Denver and a good time next June.

† † †

"A Bad Date for the Doctors."

There appeared in the columns of the *Denver Republican* of recent issue a most excellent editorial on "A Bad Date for the Doctors," in which the attention of the promoters of the entertaining of the American Medical Association in Denver in June, was called to the unfavorable weather report for this week in June for the last twenty-one years.

The records show a very discouraging array of bad days, at that time it is true, when the weather is not only likely to be rainy but cold, and as the main object to be gained by this convention being held here is to "show off" our climate, the result will very probably be that of the proverbially smart child before company.

It is indeed unfortunate that the constitution of the association fixes this date and it cannot be changed only through parliamentary proceedings. We are all anxious that this meeting shall be a success as far as Colorado is concerned, and realize the vital im-

portance of fair weather to attain this end, but we are all going to be as optimistic as possible and lay our plans on the expectation, that, as deserving a class of men as doctors are, ought and will be rewarded with the best.

† † †

The Western Surgical and Gynecological Association.

This distinguished body of men will meet in Denver on the 28th and 29th of this month, the sessions being held at the Brown Palace Hotel. The local committee of arrangements, Drs. Grant, Fleming, Lemen, Hawkins, Leonard Freeman, Craig, Jayne and Wetherill are busy preparing the details of the arrangements and the meeting is already an assured success. As many as fifty visiting doctors are expected, and at the close of the very attractive program which has been prepared, a banquet will be tendered the visiting physicians by the physicians of Denver.

Denver may well feel honored at being selected as a meeting place for such a scientific body and we hope the Denver profession will show the proper spirit of enthusiasm and interest in the meeting and do all they can to make it a great success.

† † †

For the Entertainment of the Ladies at the A. M. A. Meeting.

MR. EDITOR :—At your request, I would make the following suggestion:

Throughout my life, it has always seemed to me that most men liked what pleased their wives, and if we wish Denver and Colorado to take a firm hold upon the hearts and minds of the male members of the American Medical Association, we must begin by doing all in our power to make the first week of June, 1898, the one particular bright spot in the lives of their "better halves."

In spite of the fact that a "Tea" is apt to be a bugbear toward the end of the season, and the "giggle, gabble, gobble, gitness" seems to be more prominent, I am sure that for real sociability there is nothing that equals an afternoon tea. Why not let, say half a dozen of us, keep "open house," one afternoon and invite every lady for a cup of tea, and a chat? Wouldn't this be more truly the genuine hospitality for which the West is so well known, than to hire a hall, or some public ball room? I, for one, would be willing and happy to entertain each and every "Mrs. Dr." that comes, were my walls only made of India rubber. In any event, should this suggestion meet the approval of other ladies, I should like to be numbered among those whose house is at the disposal of the entire Association.

MABEL WHITNEY.

Letters To The Editor.

Dr. Alfred Bennett, a recent graduate of the State University Medical School and to whom the JOURNAL finds its way each month, on the coast of South-West Africa, sends us the following interesting letter from his far off home:—

ELLATTE, S. W. AFRICA, Aug. 30, 1897.

EDITOR COLORADO MEDICAL JOURNAL:

On the west coast of Africa the Guinea-worm (*Filaria medinensis*) is quite common. During my voyage to Africa we took on a batch of natives at Serra Leme as deck hands, and several "Kru" boys at Accra, the capitol of the Gold Coast.

During the illness of the ship's surgeon, the captain of the S. S. "Niger" asked me to care for the sick. Among the native passengers and deck hands on that one ship I saw seven cases of Guinea-worm, and three others after landing at Batanga. The natives catch and wind around a match or piece of bamboo the portion of the worm projecting, and each day draw out a section by traction.

In each of the ten cases I have seen, the worm was located in either the foot or the ankle. One worm when extracted measured three feet and four inches long, the diameter being approximately one-tenth of an inch.

Far more common than the Guinea-worm, and a far greater nuisance to both natives and foreigners in western Africa, is the Jigger (sand flea) *Pulex penetrans*. Foreigners find it necessary to examine their feet nightly before retiring, and they become quite expert in locating the little black speck which indicates the abode of a "jigger." When discovered it is removed with ease by use of a needle and slight pressure, but if left in the foot, eggs are laid and the jigger works deep into the tissues, producing inflammation and *intense* itching. I am treating one native boy now, belonging to the "Bulu" people, who has already lost two toes from his neglect in not extracting the jiggers, and my own personal record is seven jiggers out of one foot in four days. I have been using on natives and foreigners with considerable success the following:

R. Oleum Caryophylli, - - - gtt v
 Unguentum Petrolatum, - - - ʒ j

Sig.: Rub well into the feet and between the toes night and morning.

ALBERT L. BENNETT, M. D.

In a recent personal letter to Dr. Eskridge, of this city, Dr. M. H. Mack, who is taking post-graduate work in London, tells some

interesting things of his work there, and Dr. Eskridge kindly permits us to publish them for the pleasure of the JOURNAL's readers.

* * * I find I made no mistake by coming here. The material is much more plentiful than in New York.

I am taking both rectal and genito-urinary diseases. St. Mark's is the rectal, and St. Peter's the genito-urinary hospital. They have the best surgeons in London connected with both. Mr. Fenwick, who stands pre-eminent in England in genito-urinary surgery, is the leading surgeon in St. Peter's Hospital. Mr. Allingham is connected with St. Mark's.

There is so much material that it is impossible to keep up with it. The surgeon in charge picks out the more important cases while his assistants treat the others.

Operations are very numerous. This morning I saw three at St. Mark's; to-morrow they have four or five. Yesterday it took nearly two hours to treat the new patients at St. Mark's. I had the privilege of examining them all, and the surgeon took particular pains to explain everything. At St. Peter's, Mr. Fenwick demonstrated the use of the cystoscope and urethroscope, and showed how to pass sounds into the ureters, etc.

Between the two hospitals it keeps me quite busy, but luckily they are not very far apart.

I had a very pleasant trip over and never missed a meal on board. I was not sick at all.

I went to the Infirmary at Edinburgh and saw Mr. Annandall do a Kraske, and then heard him lecture on "Urethral Stricture," both of which were good.

Surgeons here pay very little attention to antiseptics, but the technique of their operations is always good.

I saw the first real fog yesterday, and it was a "corker"—it is the only word that expresses it. It came on suddenly about three o'clock and everything was perfectly black. One could hardly see a foot ahead, and all the street lamps were lighted.

I have not yet become an adept in climbing on and off busses, but with a little more practice, think I will be able to do it quite gracefully.

My friend, Dr. Marey, formerly of Elbert, Colo., is here with me, looking up children's diseases. * * * *

Veterinary Surgeon (to his new assistant).—"You must take this tube, Pat, fill it with this powder, insert in the horse's mouth, and give a quick, sharp blow."

Vet. (ten minutes later).—"What's the trouble, Pat?"

Pat.—"Troth, sir, the horse blowed first."

Book Reviews.

TRANSACTIONS OF THE COLORADO STATE MEDICAL SOCIETY FOR 1897.—

It is a pleasure to note the excellence of the editing and book-making which mark this year's report. The volume just issued is one of the most attractive ever printed by the society. It is a fitting conclusion to an ably conducted meeting.

The explanation of the success of the late session might have been discovered a year ago, when the president was chosen. It could be safely predicted at that time that the president of the society and the chairman of the executive committee would bring large popularity and tireless endeavor to their executive task. The proceedings so cleverly preserved to us reflect the large success attained.

The secretary has certainly revealed in this volume abilities which he was known to possess when first elected to his responsible office. As long as Dr. Whitney will consent to serve, he should be annually reelected. This year's report is from cover to cover a credit to his painstaking effort, and we who know the hours and days of weary labor which must precede such an issue, gladly thank him for his work.

The book is not faultless; it would be expecting more than any one is entitled to ask to require that.

We trust the Secretary shall from year to year be granted larger liberties in the elimination of much unimportant matter which (we doubt not) is reluctantly permitted a place on the pages of the report. Many discussions are so poor in ideas and lame in diction, as to greatly mar the symmetry of the record. Permitted thus to stand, such contributions prove a detriment to the Society abroad.

There is serious need of more careful study and framing of the annual programs. Grotesque and unscientific titles should not be permitted. The executive committee should exercise a stricter supervision of the program, both as to arrangement and to subject matter. Should this not prove feasible for this committee, then a supervisory committee on program should be appointed by the president, with authority to review and pass upon each manuscript before it is given a place in the program. Should the contribution prove inferior, its early rejection would relieve the secretary from the later unpleasant and laborious duty of re-writing it, or wrestling with the "busy" contributor to achieve the same end. For as long as inferior contributions are permitted, just so long will the standard of the society's work be measured by its report.

There is a strong feeling current that the program could be best executed by dividing the sessions into sections. Some of these would necessarily be held simultaneously; but the subjects discussed being dissimilar, very few members would desire to hear papers in two sections at the same time.

The minutes of this year's session, showing as they do much careful detail, might wisely have been spared a certain reportorial style bordering closely on sensationalism. One might imagine the last day's report to be a record of some political campaign in which fulsome and lavish eulogies were recklessly bestowed. It was intended to be simply the record of a day's work in a scientific society—only this and nothing more—in spite of "great applause;" "prolonged cheering" and like melodramatic scenes. We must try to bear patiently all these things. Since our meek provincialism has essayed the entertainment of a mighty organization which metropolitan cities stagger at, we should have a heart for any fate.

A. S. L.

The 1897 volume of the Transactions of the Colorado State Medical Society reached us last month. Dr. H. B. Whitney evidently gave the matter of the compilation of the book his personal supervision, as for neatness it equals any volume of the past, and in accuracy of detail, as to the transactions, more may be said than of the value of some of its contents; fortunately, however, Dr. Whitney is not responsible for this, and we may well say that our secretary has done his work well.

Of the forty-five subjects printed in the transactions, about three were well discussed, about ten very feebly, a few others excited some interest, and about one-half brought forth no discussion. A single subject thoroughly discussed is of more importance to the members of the society than hundreds such as shown in the latest transactions of the Colorado State Medical Society.

The report of the Colorado Medical Library Association, by its secretary, Dr. Sewall, brought forth sufficient discussion to show that there is an increase in the interest evidenced by the profession. To Dr. Sewall is due the credit of a rapidly increasing medical library.

Grouped under general medicine we discover seventeen papers were read before the society, seven of which were confined to a symposium upon the subject of peritonitis. This symposium brought out a few interesting facts, but evidently excited little interest. Dr. Kahn gave a concise statement as to the etiology and varieties of peritonitis. The symptoms of the disease were well described by Dr. McHugh.

The differential diagnosis of inflammations of the peritoneum was more than ably handled by Dr. Hubert Work. "Nervous Disorders Simulating Peritonitis" was an important feature of the symposium. Dr. Hopkin's paper on the subject shows that he was well chosen for the part. Of "The Medical Treatment of Peritonitis," all that is to be said was presented in Dr. Campbell's paper; not so, however, with the "Surgical Treatment;" this, the most important part of the symposium, was treated in the crudest and most haphazard manner. The one sentence occurring in Dr. Finney's paper, "In most of these diseases, if prompt surgical interference is invoked, general peritonitis may be avoided and a life saved," was fruit for a long and interesting discussion, and this alone convinces us of the state of lethargy existing during the meeting. Dr. Stoddard's paper on "Post Operative Peritonitis," had it been discussed, would have brought out some interesting points, which he overlooked; for instance, the hint given by Dr. Kahn as to the passage through the bowels of the colon bacillus. Not only was there nothing new brought out in this symposium, but much that should have been dwelt upon was left unsaid.

Of the ten other medical subjects, it may be said, a few were important, some worthy of notice, others could well have been left off the programme. The papers written by Drs. Waxham, Bonney, Campbell and Hall saved the medical section from chaos.

The papers on Surgery brought out little or nothing. Dr. Rogers' two cases were interesting and instructive. Dr. Freeman added his usual force to the meeting. We commend him for the interest he still manifests in the use of the Roentgen Rays. Dr. Kickland's "Operation for Appendicitis and its After Treatment" shows very clearly "what may be done in the country." The subject was not discussed.

Dr. Nichols' paper on "A Plea for Operative Treatment in Certain Fractures and Dislocations," was the surgical effort of the meeting; it brought forth excellent discussion, and was of a type that makes medical associations a success. The other papers were of more or less interest and helped to fill out the surgical part of the programme.

Gynecology, as usual, brought forth its quota of papers. The bones of an antiquated subject were rattled for a short time, in the form of electricity in the Diseases of Women. Dr. Nichols effectually saved the paper from doing harm.

Dr. Liebhart's paper on "Puerperal Mastitis" is worthy of the most careful reading, and is a bright spot in the new volume. Dr. Kate Lobingier has convinced us that chloroform in labour is de-

void of danger and adds greatly to the comfort both of the physician and patient.

The subject of a paper that excited no little interest, was "The Use and Abuse of the Uterine Curette;" Dr. Wetherill was its author. The article was evidently meant as a hint to the inexperienced as to the abuse of the curette, but why not give us a paper on the abuse of splints in fractures; the knife in operations; medicine in disease, etc., etc.

In pediatrics, Dr. Whitney gave a well timed and valuable paper on "The Importance of Diet in Infancy." What a blessing to read upon such a subject without being confronted with a single "food stuff" advertisement!

Of Dr. Packard, it can hardly be said that he did the subject of "The Treatment of Potts' Disease of the Spine" justice. How about the recent operative procedure in such cases?

The crowning effort of the occasion came in the line of neurology. "The difficulties" met with "in determining the causes of coma," are known to every practitioner. Indeed, there were some comas, yes, many, we never did fully understand. In Dr. Eskridge's article we shall always find a valuable guide. This one article is worth all the trouble of the compilation of the work, and we thank Dr. Eskridge for the aid it will afford us in the future.

The ophthalmologists were awake to the occasion, in the number of papers presented. Dr. LeMond's paper on "Galvanism in Ulcerative Keratitis, would better have been named "The Actual Cautery in Ulcerateve Keratitis." Dr. LeMond would surely not have us believe that the galvanic cautery possesses any therapeutic virtues not obtainable from the actual cautery derived from other sources of heat, e. g., the Paquelin cautery, or, indeed, a knitting needle held in the flame of a spirit lamp until it has become red hot. This subject is so exhaustively treated in the recent text books on ophthalmology that there seems to be no necessity for the paper. For instance, vide Fuch pps. 148, 153, Nettleship pps. 135, 138, Noyes pps. 368, 369.

Dr. Bane's paper is a brief resume of our present knowledge of the subject of which it treats. We fail, however, to note any point either new or original, in his paper. Dr. Black's paper should have interested the eye specialists and have brought forth a vigorous discussion. It is curious to observe to what extremes the persistent study of only one aspect of a great subject will lead one. This is forcibly illustrated by the recent declaration of Stevens: "Muscular anomalies (ocular) with anomalous position of the horizontal plane of the eye, produced trachoma." While such malpos-

itions of the macula lutea, as Dr. Black describes, may occur, we question the wisdom of proceeding to operative measures based upon this fact alone.

And now, as the writer rises from the task he has just undertaken of honestly and fearlessly reviewing the Transactions of the Colorado State Medical Society, let him here earnestly protest against, what he and many others think, the increasing prevalence of the *insanabile scribendi cacoethes*, and urge upon the members of this well meaning body, to exert themselves in the future to bring up only those subjects that are of vital importance to themselves, and to remember that a few papers scientifically prepared and thoroughly discussed, will add everything to their transactions in the future. H.

LECTURES ON MALARIAL FEVERS. By William Sydney Thayer, M. D., Associate Professor of Medicine in the Johns Hopkins University, New York: D. Appleton & Co., 1897.

This is an excellent book. From first to last it is very readable and it certainly covers the entire subject. Much of the material has been scattered through the medical journals during the past few years, but to Dr. Thayer is due the credit of its collection. This with his independent studies of the subject has made a valuable book.

There are sixteen chapters in the book, nineteen charts and three colored plates, all of which nicely illustrate the text.

He calls attention to the fact that the term "plasmodium malariae" is injudicious and misleading, as it means a large multinuclear mass of protoplasm, while the amoeba of malaria is small and hyaline.

As regards the manner of infection he believes that the most frequent one is through the respiratory tract.

It is with the greatest interest that we review the chapter devoted to the diagnosis, prognosis and treatment. "The one process above all others which is confounded with malarial intermittent fever is pulmonary tuberculosis. It is safe to say that the majority of cases of pulmonary tuberculosis occurring in malarious districts in this country, are, at some time in their course, mistaken for malarial fever." A review of the various processes causing symptoms of malaria makes a well arranged section. He quotes at length the opinions and expressions of Binz and Laveran regarding the parasiticidal effect of quinine upon the malarial organism and asserts that in quinine we have a true specific in malaria. This is rather a broad statement in the face of clinical experience with this drug in chronic cases.

The time for its administration in acute cases is just before and during the paroxysm. In chronic cases five grains is recommended every four hours.

The publishers have done their part in making a handsome volume of the work.

TRAUMATIC INJURIES OF THE BRAIN AND ITS MEMBRANES.—With a Special Study of Pistol-Shot Wounds of The Head in Their Medico-Legal and Surgical Relations. By Charles Phelps, M.D., Surgeon to Bellevue and St. Vincent's Hospital, New York. D. Appleton & Co. 1897.

This is a most valuable work on cerebral injuries, and especially those that are the result of pistol-shot wounds. The chapter designated "A Preliminary Consideration of Cranial Fractures" is very clear and full. Giving, as it does, the different symptoms and signs of injuries to the skull and its contents in general, with the diagnostic value of each, makes it a most valuable introduction to what is to follow.

The chapter on Pathology is "up to date" and describes actual changes in the cerebral tissue, and leaves out of consideration that vague condition so long connected with cerebral injuries, viz.: concussion,

The diagnosis is fully dealt with and the fact that a most careful scrutiny of every case, picked up unconscious, should be made in order to differentiate between alcoholism, the effects of opiates, and the more grave troubles involving the calvarium and its contents, is rigidly insisted upon. The clues to making this differential diagnosis are fully brought out.

The treatment, as recommended, is preeminently the work of a mind whose creed is asepticism linked with conservatism, and still a determination to do all that is necessary to give the patient the best possible chance of recovery.

The fact that these rules are formulated from experience gleaned from the observation of five hundred cases, makes the book one of the most valuable to anyone who comes in contact with the conditions of which it treats. It is especially valuable to the practitioner whose experience in head injuries is limited, for it is a safe guide, being based upon experiments and the observation of a sufficient number of cases to make the statements of its author authoritative.

The close post mortem observation is exceedingly valuable, and the cuts in the book, of different conditions, the results of injuries to the scalp, bones of the cranium, and the several meninges and tissue, are exceptionally good.

A. C. G.

INDEX TO SUBJECTS.

VOLUME III.

	PAGE.
Among our Exchanges.....	Insert, 323, 352
Animal Diseases Communicable to Man.....	Charles Gresswell, M.R.C.V.S. 443
April Questions of State Medical Examiners.....	183
Advances in Diagnosis and Prevention of Typhoid Fever.....	Wm. C. Mitchell. 414
Bacteriological Diagnosis in Typhoid Fever.....	Wm. C. Mitchell. 125
Book Reviews: Dr. Tyson's Practice.....	39
Dr. Keeley's Non-Heridity of Inebriety.....	40
Diseases of the Stomach, by Max Einhorn, M.D.....	77
Principles or Guides for a Better Selection or Classification of Consumptives Amenable to High Altitude Treatment, by A. Edgar Tussey, M.D.....	167
Artificial Anesthesia, by Lawrence Turnbull, M.D....	Insert No. 5
Autoscopy of Larynx and Trachea, by Alfred Kirstein, M.D.,	Insert No. 5
Diseases of the Pleura, by Herbert Whitney, M.D....	Insert No. 5
The Stomach and Its Disorders and How to Cure Them, by J. H. Kellogg, M.D.....	203
Hysteria and Certain Allied Conditions, by G.J. Preston, M.D.	249
Syringomyelia, by Guy Hinsdale, M.D.....	288
Warner's Pocket Medical Dictionary.....	288
Eye-Strain in Health and Disease, Ambrose L. Ranney, M.D.	324
Diseases of Ear, Nose and Throat and Their Cavities, by Seth Bishop, M.D.....	325
The Eye As an Aid in General Diagnosis, E. H. Linnell, M.D.	326
Lippincott's Medical Dictionary.....	364
Urinalysis, by Heinrich Stern, M.D.....	402
Manual of Gynecology, by Henry T. Byford, M.D.....	442
Transactions of The Colorado State Medical Society for 1897.	473
Lectures on Malarial Fever. Thayer.....	477
Traumatic Injuries of the Brain and Its Membranes. Phelps.	478
Colorado Medical Library Association.....	57
Complete Blindness from Bilateral Pressure on the Optic Radiation, Probably Due to Hemorrhage.....	W. W. Reed. 136
Contribution to the Pathology, Diagnosis and Treatment of Gastric Disorders,	E. P. Hershey. 295
Case of Pulmonary Tuberculosis, With Tubercular Pleurisy, Effusion on Left Side, Aspiration, Pneumo-Thorax, Occurring in the Practice of Dr. Fisk,	C. D. Nelson. 303
Character of Pulmonary Cases Coming to Colorado.....	W. A. Campbell. 338
Chloroform in Normal Labor.....	Kate Reynolds Lobingier 368
Case of Placenta Previa.....	B. A. Peden. 381
Digestion vs. Drugs in Treatment of Pulmonary Tuberculosis.....	S. A. Fisk. 205
Editorials: Western Surgical and Gynaecological Association.....	31
Another for the State Board of Health.....	31
Colorado Medical Library Association.....	31
You and Our Advertisers.....	32
One Dispensary for Denver.....	32
New Cure for Diphtheria.....	W. P. Munn. 32
An Appeal to Those Who Use Bromine.....	C. E. Tennant, Jr. 33

How Shall Physicians Protect Themselves?.....	J. N. H.	34
Indemnity Bonds for Plaintiff in Damage Suits.....	H. G. W.	35
Doctors of Refraction.....	G. M. B.	36
County Medical Society's Cemetery Ground.....		71
The Oriental Plague.....		71
Physicians' Mutual Aid Society.....		71
The Denver and Arapahoe Medical Society.....		72
Antiseptic Street Sprinkling.....		72
The Old School and Homeopathy.....		73
Shall Denver Entertain The American Medical Association in 1898?.....	J. N. H.	74
Ninth Biennial Report of the Colorado State Insane Asylum....		75
The American Medical Association.....		116
More Malpractice Suits.....	W. P. M.	116
The Colorado State Medical Society.....		161
The Psychology of the Prize Fight.....		162
Consolidation of Denver's Medical College Dispensaries.....		163
The American Medical Association in Denver in 1898.....		164
Defunct Medical Bill.....		165
The St. Louis Plan.....		165
The American Medical Association in 1898.....		201
Colorado State Medical Society.....		201
Denver Gets The American Medical Association in 1898.....		241
Typhoid Fever Mortality in American Cities in 1896, W. P. Munn.		242
Copying and Refilling Prescriptions.....	J. M. Blaine.	244
Paving for Residence Streets.....	H. G. W.	245
Why Not Consolidate Our Medical Schools Now?.....		246
Annual Report of the Bureau of Health of Denver for 1896.....	H. W. McLauthlin	247
State Medical School Question.....		284
The Americal Medical Association.....		285
Colorado State Medical Society.....		286
The American Medical Association and Denver.....		317
The Vivisection Memorial.....	Charles Denison	318
The Permanent Secretary of The American Medical Association.		321
Did You Ever See a Case of Colpocatersis.....	Carl Johnson	322
Seasonable Suggestive Therapeutics.....		322
National Statuary Hall.....	C. S. Elder	353
The Teachings of John Armstrong.....		354
Indifference of Patients.....		357
Our September Number.....		358
An Examination for Medical Professors.....		358
Hospital Rooms in New Houses.....		359
Study of the American Flora.....		359
Method of Clinical Instruction in Medical Colleges.....	C. A. Powers.	360
Monthly Bulletin of Colorado Medical Library Association.....		
.....C. D. Spivak.		361, 393, 441, 466
Observations on Beginning of Practice Anew.....	G. H. S.	385
Yellow Fever in Colorado.....	J. N. H.	386
British Medical Association.....	E. C. Rivers.	387
What Will We Do With It?.....	S. A. Fisk.	389
Professional Philanthropists.....		392
Hot Baths in Colorado.....		401
A Remedy for Dispensary Abuse.....	H. G. Wetherill	433
Medical Expert Testimony in Luetgert Case.....	W. P. Munn	434
The Ladies and The American Medical Association, Mrs. Spivak.		437
A Souvenir to Ladies Visiting Denver at Convention of American Medical Association, From Physicians Wives of Colorado....		
.....C. D. Spivak		438
The Physician's Stony Road.....		440
The American Medical Association.....		440
The Year That Has Passed.....		467
How the Proceedings of The Am. Medical Society Are Reported.		468
A Municipal Outrage.....		468

INDEX.

III

Dr. Jackson Speaks a Good Word for Denver.....	469
A Bad Date for the Doctors.....	469
The Western Surgical and Gynecological Association.....	470
For the Entertainment of the Ladies at the A. M. A. Meeting.....	470
Fractures of the Neck of the Femur.....	79
Fracture of the Ulna Followed by Extensive Suppuration, With Special Reference to the Treatment of the Suppuration. Report of a Case.....	
.....A. C. Godfrey.	301
Gynecology Up to Date.....	H. G. Wetherill. 51
Gastric Ulcer—Probably Tubercular. Report of Case.....	Norman W. Bellrose. 169
How the Ladies Were Entertained at The American Medical Association in Philadelphia.....	Mrs. E. R. Axtell. 314
"Home and Heartcase".....	Rev. Frederick Oakes. 399
Importance of Blood Study in Early Tuberculosis, With Technique of Preparing Blood Films for Study.....	A. L. Holmes. 48
Inversion of the Uterus.....	Jesse Hawes. 457
Letters to the Editor:.....	Henry Sewall, L. B. Brasher, R. G. Blow. 24
New York Letter.....	G. H. Stover. 110, 148
Baltimore Letter.....	G. H. Stover. 217, 305
Letter From Leipsic.....	A. R. Seebass. 308
Letter From South West Africa.....	Albert L. Bennett. 471
Letter From London, England.....	M. H. Mack. 471
Memoranda <i>Vide</i> the Second Pan-American Medical Congress... W. P. Munn. 10	
Milk as a Food, the Fermentations to Which it is Liable and the Value of Pasteurization.....	Robert Meade Smith. 84, 142, 175
Medical College Commencements.....	166
News Items.....	26, 64, 121, 158, 198, 237, 283, 310, 350, 383, 297, 430, 465
New Medical Legislation.....	54
Nervous Disorders Simulating Peritonitis.....	S. D. Hopkins. 334
Obituary: Dr. Jacob Reed.....	13
Dr. Hugo Mager.....	316
Dr. W. J. Maxwell.....	400
Professional and Technical Schools, Especially Those of Medicine, in Their Relation to the College Course.....	J. T. Eskridge 96
Pain as a Symptom in Pleurisy.....	J. Tracy Melvin 212
Post Abortive Sepsis.....	P. Hyrup-Pedersen. 345
Pre-Natal Culture Dogma.....	Francis M. Tandy. 377
Prevention and Suppression of Contagious Diseases in Rural Communities.....	H. W. McLauthlin 407
Respiratory Paralysis From Haemorrhage Around the Medulla, S. D. Hopkins 5	
Report of Case of Artesia of the Vagina, Caused by Diphtheria During Childhood, Haematocolpus, Operation and Recovery.....	P. Hyrup-Pedersen 8
Report of Cases of Osteomyelitis and Sarcoma.....	A. C. Godfrey. 208
Report of Surgical Cases.....	Leonard Freeman 327
Radical Cure of Hernia, With Report of Case.....	Frank Finney 373
Relation Between Sanitary Science and Surgerv.....	E. J. A. Rogers. 403
Reports of Denver and Arapahoe Medical Society.....	
.....16, 58, 113, 150, 190, 218, 363, 395, 426, 459, 463	
Reports of Denver Clinical and Path. Society.....	21, 64, 117, 156, 194, 234, 428, 461
Reports of Practitioners' Club.....	23, 65, 119, 195, 236, 464
Reports of Woman's Clinical Society.....	23, 67, 119, 157, 195, 236, 464
Reports of Denver Medical College Alumni Association.....	24, 67
Report of Weld County Medical Society.....	120

State Medical Society Proceedings.....	251
Some Interesting Surgical Cases.....	R. L. McCreery. 275
Some Remarks Upon Tinea Tricophytosis or Barber's Itch.....	M. H. Sears. 453
Salivary Calculus.....	Ira Woodward. 377
Should Measles and Whooping Cough be Quarantined.....	Hubert Work. 422
Two Cases of Fracture of the Skull.....	Clayton Parkhill. 1
Treatment of Phthisis.....	A. R. Seebass. 45
The Tropometer.....	G. Melville Black. 186
Treatment of Uterine Fibroids.....	I. B. Perkins. 289
Treatment of Potts Disease of the Spine.....	G. B. Packard. 365
Union Catalogue of Medical Books and Some of the Private Medical Libraries in the City of Denver.....	C. D. Spivak. 214
Voluntary Fracture and Dislocation of the Second Cervical Vertebra. Report of a Case.....	A. Stewart Lobingier 41

At a recent meeting of the Reform Department of the Woman's Club the subject of vivisection was heatedly discussed. Dr. Mary Barker Bates opened the discussion and her remarks were well put, and throughout her talk she maintained a dignified as well as a logical stand in presenting her points, without stooping to petty personalities or sarcasm. She was followed by Dr. Burr who presented a few cold facts, some assertions but very little argument, against vivisection. Dr. Harris followed Dr. Burr on the negative side, and ascended the platform with the air of one carrying a chip on his shoulder he wished someone would knock off. His talk lacked the same statement of facts that his predecessor's did and was too much filled up with sarcastic utterances to admit of much weight. Some of his remarks were made with a glaring lack of accuracy. Someone in the audience called on Dr. Munn who was present and he made a plea for vivisection, as necessary to relieve the sufferings of humanity, and held that the cruelty, slight as it was, was not to be considered when human life was at stake. He defended the efficacy of antitoxin and incidentally knocked the chip off Dr. Harris' shoulder. Mrs. Bradford closed the discussion in a very animated appeal to the emotions of the mothers present who would think of allowing their children to grow up amid such viciousness. She claimed that children who tortured animals in the back yard were taught such cruelties by seeing and hearing of vivisection. It is more than probable however that children tortured animals in the back yard long before anything was ever heard or known of vivisection.

"A capital invention, these horseless carriages!" "Don't talk rubbish. We have had for a long time things quite as remarkable in their way as horseless carriages, and nobody takes the slightest notice of them." "Indeed! What, for instance?" "Cowless milk."—*Exchange*.

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